

# Reading Comprehension

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Questions 1–3 are based on the following reading passage.

While new census data reveals that unemployment numbers are even direr than was previously suspected, it is not clear that the forecast for American entrepreneurship is equally alarming. An article in a major national newspaper suggests that the contraction in hiring at existing companies might result in more new companies being founded. College graduates, unable to find traditional jobs, instead opt to start their own businesses. While a recession may seem an unpropitious time for such a historically risky endeavor, with no better options, would-be entrepreneurs have little to lose. Unfortunately, this situation does not necessarily impact the economy positively. Though the average number of new businesses started per year has been higher during the recession than it was before, the proportion of high-value businesses founded each year has declined. So even if a business manages to stay solvent, it may not bring significant returns. Also, because of an inevitable dearth of angel investors and venture capitalists, many new entrepreneurs are putting their own money on the line. In certain ways, the choice between accepting a traditional job and starting a business is not unlike the choice between renting and buying property. The latter requires a significant initial outlay and carries heavier risks, but the rewards can be equally substantial.

1. The primary purpose of the passage is to
  - (A) propose changes in the way the public generally interprets census data
  - (B) maintain that college students should form their own companies, especially during economic recessions
  - (C) present a nuanced view of a contemporary economic issue
  - (D) evaluate the viability of low- versus high-value businesses under various environmental conditions
  - (E) draw an analogy between career decisions and real estate decisions, specifically the choice to rent or buy property
2. According to the passage, the reason that many college graduates are choosing to launch their own companies in the present economic climate is that
  - (A) they are hampered by the difficulty of finding outside investors
  - (B) they cannot easily land positions typically open to workers of their experience
  - (C) the prevalence of low-value companies has increased
  - (D) they are forced to decide between renting and buying property
  - (E) forecasts of the unemployment rate are likely to become less dire in coming years
3. It can be inferred from the passage that over the course of the recent recession, the number of American high-value businesses founded per year
  - (A) has fallen sharply
  - (B) has fallen moderately
  - (C) has risen sharply

- (D ) has risen moderately  
(E) may have either fallen or risen

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**Question 4 is based on the following reading passage.**

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According to Mercy Amba Oduyoye in *Daughters of Anowa: African Women and Patriarchy*, the women of the Asante people of Ghana participated in war as nurses or in providing supplies, but only those who had not yet reached or who were past childbearing age. If such women died in battle, they died “as individuals and not as potential sources of human life.”

5 As such, many old women engaged in valiant acts, sometimes sacrificing their own lives, to defend those they had given life to.

4. Which of the following can be inferred from the passage?

- (A ) The deaths of Asante women of childbearing age were lamented more than were the deaths of other women.  
(B ) Older Asante women were more courageous than younger Asante women.  
(C ) Some of those who worked as nurses or in providing supplies died in battle.  
(D ) Women of childbearing age were accorded special status above other women and men.  
(E) Men could not be considered “potential sources of human life.”

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**Questions 5–7 are based on the following reading passage.**

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The past decade has seen a statistically significant uptick in reports of the bacterial strains known as “super-bugs,” so called not because of enhanced virulence, but because of their resistance to many antimicrobial agents. In particular, researchers have become alarmed about NDM-1 (New Delhi metallo-beta-lactamase), which is not a single bacterial species, but a transmittable genetic element encoding multiple resistance genes. A resistance “cocktail” such as NDM-1

5 could bestow immunity to a bevy of preexisting drugs simultaneously, rendering the bacterium nearly impenetrable.

However, in spite of the well-documented dangers posed by antibiotic-resistant bacteria, many scientists argue that the human race has more to fear from viruses. Whereas bacteria reproduce asexually through binary fission, viruses lack the necessary structures for reproduction, and so are known as “intracellular obligate parasites.” Virus particles called virions must marshal the host cell’s  
10 ribosomes, enzymes, and other cellular machinery in order to propagate. Once various viral components have been built, they bind together randomly in the cellular cytoplasm. The newly finished copies of the virus break through the cellular membrane, destroying the cell in the process. Because of this, viral infections cannot be treated ex post facto in the same way that bacterial infections can, since antivirals designed to kill the virus could do critical damage  
15 to the host cell itself. In fact, viruses can infect bacteria (themselves complete cells), but not the other way around. For many viruses, such as that responsible for the common cold sore, remission rather than cure is the goal of currently  
20 available treatment.

While the insidious spread of drug-resistant bacteria fueled by overuse of antibiotics in agriculture is nothing to be sneezed at, bacteria lack the potential for cataclysm that viruses have. The prominent virologist

Nathan Wolfe considers human immunodeficiency virus (HIV), which has resulted in the deaths of more than thirty million people and infected twice that number, “the biggest near-miss of our lifetime.” Despite being the most lethal pandemic in history, HIV could

25 have caused far worse effects. It is only fortunate happenstance that this virus cannot be transmitted through respiratory droplets, as can the viruses that cause modern strains of swine flu (H1N1), avian flu (H5N1), and SARS.

5. The main purpose of the passage can be expressed most accurately by which of the following?

- (A) To contrast the manner by which bacteria and viruses infect the human body and cause cellular damage.
- (B) To explain the operations by which viruses use cell machinery to propagate.
- (C) To argue for additional resources to combat drug-resistant bacteria and easily transmissible pathogenic viruses.
- (D) To highlight the good fortune experienced by the human race, in that the HIV pandemic has not been more lethal.
- (E) To compare the relative dangers of two biological threats and judge one of them to be far more important.

6. It can be inferred from the passage that infections by bacteria

- (A) result from asexual reproduction through binary fission
- (B) can be treated *ex post facto* by antimicrobial agents
- (C) can be rendered vulnerable by a resistance cocktail such as NDM-1
- (D) are rarely cured by currently available treatments, but rather only put into remission
- (E) mirror those by viruses, in that they can both do critical damage to the host cell

7. According to the passage, intracellular obligate parasites

- (A) are unable to propagate themselves on their own
- (B) assemble their components randomly out of virions
- (C) reproduce themselves through sexual combination with host cells
- (D) have become resistant to antibiotics through the overuse of these drugs
- (E) construct necessary reproductive structures out of destroyed host cells

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**Questions 8–10 are based on the following reading passage.**

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A supernova is a brief stellar explosion so luminous that it can briefly outshine an entire galaxy. While the explosion itself takes less than fifteen seconds, supernovae take weeks or months to fade from view; during that time, a supernova can emit an amount of energy equivalent to the amount of energy the sun is expected to radiate over its entire lifespan.

5 Supernovae generate enough heat to create heavy elements, such as mercury, gold, and silver. Although supernovae explode frequently, few of them are visible (from Earth) to the naked eye.

In 1604 in Padua, Italy, a supernova became visible, appearing as a star so bright that it was visible in daylight for more than a year. Galileo, who lectured at the university, gave several lectures widely attended by the public. The lectures not only sought to explain the origin of the “star” (some posited that perhaps it was merely “vapour near the earth”), but seriously undermined the

10 views of many philosophers that the heavens were unchangeable. This idea was foundational to a worldview underpinned by a central and all-important Earth, with celestial bodies merely rotating around it.

8.The prim ary purpose of the passage is to

- (A ) give the history of supernovae
- (B ) describe a shift in thought as a result of a natural event
- (C ) juxtapose tw o opposing view s about supernovae
- (D ) corroborate the view that the earth is not central to the universe
- (E) explain how science and philosophy interrelate

C onsider each of the answ er choices separately and indicate all that apply.

9.W hich of the follow ing can be inferred by the passage?

- ☐ Supernovae can take over a year to fade from view .
- ☐ Prior to 1604,no one had ever seen a supernova.
- ☐ G alileo convinced philosophers of the incorrectness of their view s.

10.The author m entions w hich of the follow ing as a result of the supernova of 1604?

- (A ) The supernova created and dispersed the heavy elem ents out of w hich the earth and everything on it is m ade.
- (B ) G alileo explained the origin of the supernova.
- (C ) The public w as interested in hearing lectures about the phenom enon.
- (D ) G alileo’s lectures w ere opposed by philosophers.
- (E) Those w ho thought the supernova w as “vapour” w ere proved w rong.

**Q uestion 11 is based on the follow ing reading passage.**

*A Sm all Place* is Jam aica K incaid’s m em oir of grow ing up in A ntigua as w ell as an indictm ent of the A ntiguan governm ent and B ritain’s colonial legacy in A ntigua.K incaid blam es colonial rule for m any of A ntigua’s current problem s,including drug dealing and selling off land for tourist properties.K incaid’s critics question w hy,if the B ritish are responsible for

5the A ntiguan governm ent’s corruption,the B ritish governm ent itself isn’t m ore corrupt.K incaid has responded that there m ust have been som e good people am ong the B ritish,but that they stayed hom e.

C onsider each of the answ er choices separately and indicate all that apply.

11.B ased on the inform ation in the passage,w hich of the follow ing w ould K incaid m ost likely agree w ith?

- ☐ A governm ent can bring about a degree of corruption abroad that the governm ent itself does not suffer from at hom e.
- ☐ B ritain has caused corruption in governm ents throughout its form er colonial em pire.
- ☐ Selling off land for tourism -related purposes is a problem for A ntigua.

**Questions 12–14 are based on the following reading passage.**

By 1784, Wolfgang Amadeus Mozart was internationally renowned as the composer of *The Marriage of Figaro*, and consequently received a commission from the Prague Opera House to compose another opera. The resulting product was *Don Giovanni*, which tells the tale of a criminal and seducer who nevertheless evokes sympathy from audiences, and whose behavior

5 fluctuates from moral crisis to hilarious escapade.

While *Don Giovanni* is widely considered to be Mozart's greatest achievement, eighteenth century audiences in Vienna — Mozart's own city — were ambivalent at best. The opera mixed traditions of moralism with those of comedy — a practice heretofore unknown among the composer's works — creating a production that was not well liked by conservative Viennese audiences. Meanwhile, however, *Don Giovanni* was performed to much acclaim throughout Europe.

12. The primary purpose of the passage is to

- (A) relate the story of a somewhat likable antihero
- (B) discuss how a work of art has been met by diverging responses
- (C) give a history of the work of Mozart
- (D) make a case for the renown of *Don Giovanni*
- (E) emphasize the moral aspects of a musical work

13. The author mentions the mixing of “traditions of moralism with those of comedy” primarily in order to

- (A) explain a work's lackluster reception among a particular group of people
- (B) remind the reader of the plot of *Don Giovanni*
- (C) highlight a practice common in contemporary opera
- (D) argue for an innovative approach to opera
- (E) undermine a previously presented assertion

14. It can be inferred from the passage that which of the following is true about the response of Viennese audiences to *Don Giovanni*?

- (A) The audiences preferred purely moralistic works.
- (B) The response was unequivocally positive.
- (C) They did not know that the composer was attempting to mix musical styles.
- (D) The play's moral themes were offensive to Viennese audiences.
- (E) To say that the response was “mixed” would be a generous interpretation.

**Questions 15–17 are based on the following reading passage.**

In the 1960's, Northwestern University sociologist John McKnight coined the term *redlining*, the practice of denying service, or charging more for service, to customers in particular geographic areas, areas often determined by the racial composition of the neighborhood. The term came from the practice of banks outlining certain areas in red on a map — within the red outline, banks refused to invest. With no access to mortgages, residents within the red line suffered low property values and landlord abandonment; buildings abandoned by landlords were then likely to become centers of drug dealing and other crime, thus further lowering property values.

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Redlining in mortgage lending was made illegal by the Fair Housing Act of 1968, which prohibited such discrimination based on race, religion, gender, familial status, disability, or ethnic origin, and by community reinvestment legislation in the 1970's. However, redlining may have continued in less explicit ways, and can also take place in regards to constrained access to health care, jobs, insurance, and more. Even today, some credit card companies send different offers to homes in different neighborhoods, and some auto insurance companies offer different rates based on zip code.

Reverse redlining occurs when predatory businesses specifically target minority consumers for the purpose of charging them more than would usually be charged to a consumer of the majority group. Redlining can lead to reverse redlining — if a retailer refuses to serve a certain area based on the ethnic-minority composition of the area, people in that area can fall prey to opportunistic smaller retailers who sell inferior goods at higher prices.

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Consider each of the answer choices separately and indicate all that apply.

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15. Which of the following can be inferred from the passage?

- ☐ Redlining ceased with the passing of the Fair Housing Act in 1968.
- ☐ Redlining today may be less overt than before its legalization.
- ☐ Access to mortgages is related to higher property values.

16. Which of the following, not mentioned in the passage, would qualify as an example of reverse redlining as defined in the passage?

- (A) A bank refuses to offer mortgages to consumers in certain neighborhoods.
- (B) Residents of low-income neighborhoods are less likely to be hired for positions than residents of higher-income neighborhoods, even when the applicants have the same qualifications.
- (C) Police respond to reports of crimes more quickly in some neighborhoods than in others.
- (D) A grocery store in a low-income neighborhood sells low-quality produce for high prices, knowing that most residents do not have the ability to buy elsewhere.
- (E) An auto insurance company hires an African American spokesperson in a bid to attract more African American consumers.

17. Which correctly describes a sequence of events presented in the passage?

- (A) Subprime mortgages lead to widespread defaults, which lead to landlord abandonment.
- (B) Reverse redlining leads to landlord abandonment, which leads to the use of buildings for crime and drug dealing.
- (C) Landlord abandonment leads to redlining, which leads to crime and drug dealing.
- (D) Redlining leads to reverse redlining, which leads to constrained access to health care, jobs, insurance, and more.
- (E) Redlining leads to landlord abandonment, which leads to the use of buildings for crime and drug dealing.

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**Question 18 is based on the following reading passage.**

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Premastication is the practice of a mother pre-chewing food before feeding it, mouth-to-mouth, to her

baby. While germophobic Western society eschews this practice, it is not only common in the developing world, but provides benefits to a developing baby. Babies are not born with digestive bacteria; they get some from passing through the birth canal, but continue to encounter the beneficial bacteria during breastfeeding and while being handled, in general, by adults.

Throughout most of human history, babies also received antibodies and digestive bacteria from the mother's saliva, transmitted via premedicated food. In some cultures, fathers also premedicate food for babies; sometimes even entire family groups will do this – a toddler at a family meal might wander from person to person, being fed by many adults.

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Consider each of the answer choices separately and indicate all that apply.

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18. Based on the information in the passage, the author of the passage would most likely agree that

- ☐ Germophobia can contribute to depriving babies of a health benefit.
- ☐ Premedicating food for babies is done only in the developing world.
- ☐ A dult saliva has benefits for babies in addition to the transmission of beneficial digestive bacteria.

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Questions 19–23 are based on the following reading passage.

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Matisse and Picasso; Picasso and Matisse. Throughout the twentieth century, this pairing has been touted as the quintessential artistic rivalry. In *Matisse and Picasso*, Yale-Arline Bos follows Hubert Damisch in proposing that the interaction between Picasso and Matisse should be seen as a dynamic game rather than a static conflict of artistic polarities. Bos employs the

5 metaphor of chess, arguing that the game represents the artists' exchange as "a competitive rivalry and a complex temporality" that can be viewed both as a linear process and a simultaneous structure.

But the metaphor of a competitive sport, however complex and intellectually rich, is misleading. The two artists were engaged not just in competition (even friendly competition) but also in friendly dialogue. The two men were more than rivals: they were colleagues, critics, teachers, and 10 occasional friends. A better model, though perhaps one with less flash, is that of a simple conversation, with all the rich variation and shifts in motivation and tone that are possible.

Picasso's *Large Nude in a Red Arm chair* marks the extremes of the artist's competitiveness towards Matisse. The painting is a clear parody of Matisse's earlier *Odalisque with a Tambourine*. The 15 composition of the figures is strikingly similar: a woman lounges in an arm chair at the center of the painting, arm raised above her head, decorative wallpaper behind her. Both paintings feature vivid color contrasts, with green wallpaper, vivid reds, glaring yellows, and rich browns. But Picasso's painting, finished in 1929, mocks the achievements of Matisse's

20 earlier work. The sensuous, rich mood of Matisse's painting has been transformed in Picasso's work into something harsh and grotesque.

The other extreme of the dialogue between the two artists can be seen in Picasso's *Woman with Yellow Hair* and Matisse's response, *The Dream*. The exchange begins with Picasso's work, in 1931. The painting depicts a woman asleep on her arms, resting on a table. She is full, rich, warm, and curved, her head and arms forming a graceful arabesque. This image seems a direct attempt to

25 master Matisse's style and to suggest to the older artist new directions for his work. While there may well be an edge of competitiveness to the painting, a sense that Picasso was demonstrating his ability to do Matisse's work, it remains in large part a helpful hint.

Matisse, nearly a decade later, continues the conversation in a similar tone. In *The Dream* of 1940, he proposes a revision of Picasso's work. Again, a woman lies asleep on a table, her arm tucked beneath her head. Matisse accepts Picasso's basic suggestions for his style: sinuous curves, volumes, and shocking uses of color to express an effect. But Matisse also modifies the earlier work significantly. Color is no longer rigidly tied to form, as bits of fuchsia seep outside the thick black line marking the outline of the table and the patch of yellow on the woman's blouse refuses to be contained by the drawn line. Matisse uses Picasso's same palette of red, purple, white, black, and yellow to create this revision, editing out only the garish green, as if to chide Picasso for the choice. The brilliant interplay of colors in Matisse's work is far more sophisticated and subtle than that offered by Picasso. "Thank you," Matisse seems to be saying, "but you missed a few spots."

19. The primary purpose of the passage is to

- (A) discuss the two best painters of an epoch
- (B) evaluate a theory and endorse a revision
- (C) compare selected works of two masters
- (D) show that Matisse's work is more sophisticated
- (E) illustrate how Picasso taught Matisse

20. The author would most likely agree with which of the following statements?

- (A) Artistic rivalries are more like Olympic competitions than professional sports.
- (B) Artistic mastery is best demonstrated by employing multiple styles.
- (C) Artists must be good conversationalists.
- (D) Artistic rivalries can actually be reciprocally nourishing.
- (E) Artistic rivalries generally last for decades.

21. According to the passage, which of the following describes *Woman with Yellow Hair*?

- (A) It was parody of a work by Matisse.
- (B) Its colors were not rigidly tied to its form.
- (C) Its color palette was larger than that of *The Dream*.
- (D) It was a response to a work by Matisse.
- (E) It was harsh and grotesque.

22. The passage indicates that

- (A) *Large Nude in a Red Arm chair* conveyed a sensuous, rich mood
- (B) Matisse verbally commented about *Woman with Yellow Hair*
- (C) Matisse and Picasso were lifelong friends
- (D) Matisse worked on *The Dream* for nearly a decade
- (E) Matisse was older than Picasso

23. Which of the following, had it actually occurred during the artists' lifetimes, would further support the author's thesis?

- (A) A joint exhibition of the two artists' work.
- (B) A radio broadcast of the two artists discussing painting.
- (C) A movie that dramatized the competition between the two artists.
- (D) A play that depicted the two artists playing chess.
- (E) A painting of the two artists.



Often taking a prominent position over a whiteboard or across a wall, timelines are one of the most common on-place classroom tools used to teach history. They present a concise chronology with dates and events listed in a linear narrative, forming a skeletal story of history. Despite their usefulness in allowing students to gain a cursory knowledge of many key

moments in the past, their bare-bones, fact-centered structure is symptomatic of the **myopic** character of curricula that emphasize the **What, When, and Who** and eclipse the significance of **Why** and **How**.

In the United States, by far the most common brand and format of timeline is the **World Almanac for Kids U.S. History Timeline**—a banner set of 8 horizontal panels each with

8 events, beginning with Columbus's voyage in 1492 and ending with Clinton's election in 1993. This timeline has photos accompanying it—about 5–6 per panel—next to most of the dates, and below each date is a 1–2

line description of an event that took place in that year. **What** immediately commands one's attention when looking at this timeline are the dates themselves. **Bolder** and **more** prominently placed than anything else, they seem implied to

be the most important feature of the timeline—even more so than the events' descriptions. The way the dates line up in perfect order presents the viewer with a rigid historical narrative, complete with a beginning and end.

To analyze any particular timeline, it is important to recognize what the timeline expresses implicitly. The first implicit message transmitted by the **World Almanac for Kids U.S. History Timeline** is that each event listed on the timeline's face must hold some kind of particular historical

significance to qualify as one of only 64 pieces of American history presented, though no event's entry gives even a vague explanation as to why it merits this. The second message the timeline

conveys, simply by hanging in the classroom, is that this version of history is an “official” one. Third, that each of these events happened totally independent of one another.

Fourth, that, at most, only one significant event occurred in any given year. And finally, that American history is entirely made up of wars and minor battles, punctuated by the occasional presidential election and

technological innovation. Now, certainly, one can easily surmise that the timeline is not conscious of these implications, and instead assumes that the viewer will automatically acknowledge that it is not a comprehensive history but rather a simple summary

of events through time. The danger of using the timeline as a teaching tool, of course, lies squarely in that assumption.

24. The author implies which of the following?

- (A) Dates are not important in history.
- (B) Historical events are not interconnected.
- (C) Implicit messages can be as important as explicit ones.
- (D) A study of American history that does not include women and minorities is incomplete.
- (E) American history is best thought of as a linear continuum of events.

25. The author's attitude toward timelines can best be described as

- (A) condescending and impertinent
- (B) tolerant and bemused
- (C) suspicious and resigned
- (D) wary and portentous
- (E) negative and complacent

26. The author would most likely agree with all of the following EXCEPT:

- (A ) There are more than 64 important events in American history.
- (B ) Some students ascribe importance to prominent graphic position.
- (C ) Timelines have some positive uses.
- (D ) Timelines have no subliminal effects.
- (E) Unofficial histories have merit.

27. According to the passage, a problem with timelines is

- (A ) their prominent placement in classrooms
- (B ) their lack of context
- (C ) their infinite nature
- (D ) their factual inaccuracy
- (E) their inclusion of photos

28. Which of the following could be substituted for the word *myopic* without changing the meaning of the passage?

- (A ) ignorant
- (B ) bigoted
- (C ) purblind
- (D ) astigmatic
- (E) mordant

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**Questions 29–34 are based on the following reading passage.**

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As queen of France, Marie Antoinette suffered what were likely the harshest criticisms ever laid against any queen or mistress in France's long history. There were two major factors that combined to propagate this dark new level of acidic criticism — one was the booming public sphere, and the second was the scandalous “Diamond Necklace Affair.”

Literacy rose greatly over the course of the 18th century and, not coincidentally, the annual output of printed publications tripled by the end of Louis XV's reign and expanded exponentially throughout Louis XV's kingship. Royal censorship had also been greatly reduced by this time, and a massive “black market” for books and extremely popular underground publications flourished during this period. Also, coffeehouse culture and print culture collided

10 during the mid-to-late 1700's, giving Parisians open forums in which to share the gossip and criticism circulating via the underground pamphlets.

Having endless numbers of pamphlets and an equally infinite number of readers eager to snap them up would be no good without a juicy story, however. This, of course, was exactly what the people received with the Diamond Necklace Affair. On August 11th, 1784, a social climber named Rohan and a prostitute named Nicole Leguay met in the gardens of Versailles. Nicole was a

15 stunning look-alike of Marie Antoinette, and she was indeed believed to be the queen by Rohan that night. To get on Marie's good side — a necessary evil for anyone with social ambitions at Versailles — Rohan was led to believe that if he procured a fabulously jeweled necklace on her behalf, it would be a great favor.

The scam was revealed when jewelers Boehmer and Bassein inquired directly to Marie Antoinette over payment for the grandiose diamond necklace. They presented her with an invoice that she had apparently signed 20 (though it was actually a clever forgery). The queen was furious and had Rohan arrested and marched off to the Bastille. Yet, in addition to the countless aristocrats who sued to the king on Rohan's behalf, at one point over 10,000 people came to

25 the doors of the Bastille demanding Rohan's release. He was eventually acquitted, much to the queen's dismay.

The consequences of this affair were severe for Marie Antoinette. The mere fact that the queen of France

could be so easily mistaken by a nobleman for a common street prostitute—one who engages in underhanded, nocturnal dealings to obtain absurdly expensive jewelry—was as incredibly damaging to her already blackened reputation. Furthermore, as this hatred of the queen began to boil over, it became inevitable that it would spill onto the monarchy itself. Though Marie would always be the ultimate villainess, she could never be completely untangled from Louis and, thus, from the monarchy itself. She was not a mistress who could be surreptitiously cut away or a political advisor who could be dismissed. She was a queen, and this fact had inescapable consequences.

29. The second paragraph of the passage serves to

- (A) elucidate further the impetus for the public disdain for a public figure
- (B) contrast two factors that spurred criticism of the queen
- (C) explain the endemic corruption of the French court
- (D) discuss the results of a famous scandal
- (E) detail reasons for Marie Antoinette's unpopularity as well as the consequences

30. The passage implies that a significant proportion of the French aristocracy

- (A) were jealous of the queen's riches
- (B) read coffee house pamphlets
- (C) proved more loyal to Louis than to the queen
- (D) were less literate than the general populace
- (E) became leaders of the Revolution

31. According to the passage, readership of books and pamphlets increased in the late 18th century because

- (A) the education of women nearly doubled the number of readers
- (B) the literacy rate tripled during the reign of Louis XV
- (C) there were more exciting scandals to write about than there had been in previous times
- (D) government censorship had relaxed
- (E) the number of coffee houses increased

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Consider each of the answer choices separately and indicate all that apply.

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32. According to the passage, Louis

- ☐ committed forgery
- ☐ had social ambitions
- ☐ had support from the populace

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Consider each of the answer choices separately and indicate all that apply.

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33. The author suggests that Marie Antoinette

- ☐ undermined the monarchy
- ☐ never met Louis

☐ had unlimited legal power

34. The author's tone could best be described as

- ☐ arrogant and supercilious  
☐ prim and meretricious  
☐ thoughtful and disinterested  
☐ sober but lascivious ☐  
analytical but enthusiastic

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Questions 35–39 are based on the following reading passage.

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In John D'Emilio's essay "Capitalism and Gay Identity," he argues that the emergence of industrial capitalism led to new opportunities for "free laborers" in the United States, leading to various beneficial changes in social conditions. It is clear that there are two overarching themes emergent from D'Emilio's argument about the effects of the onset of industrial capitalism:

the new abundance of independence, and choice for "free laborers." He implies throughout that these—  
5 independence and choice—are the distinct new markers of the social conditions resultant from this economic shift.

D'Emilio argues that capitalism empowers laborers as "free" in the sense that they are free to look for jobs and to negotiate contracts and terms of labor. D'Emilio's critics suggest that he largely sidesteps the problems that confound free labor ideology and limit the ability of workers to openly negotiate contracts with employers and to accept or reject the conditions offered. The "contract  
10 negotiations" cited as a sign of freedom by D'Emilio are often hardly negotiations at all, but rather highly exploitative arrangements that workers have little ability to affect. From the first Lowell Girls all the way to the modern third world garment works

15 described by Enloe's "Blue Jeans and Bankers," it is clear that for many—particularly women, minorities, and immigrants—free labor has hardly been free at all.

Such critics also suggest the D'Emilio misrepresents the historical and continued significance of the home. The shift from a home-based to an industrial economy—though indeed very drastic—was hardly as absolute as D'Emilio suggests. Indeed, from nannying, to  
20 housekeeping, to even the "home-based jobs" described in "Blue Jeans and Bankers," labor is still a very active part of the home even today.

In the essay "The Approaching Obsolescence of Housework: A Working-Class Perspective," Davis spends a great deal of time discussing the continuation of labor in the home in stark contrast to the assertions of D'Emilio. Where D'Emilio argues that industrial capitalism equated  
to freedom from the home, Davis argues that it actually equated to thickening the bars that caged housewives to the home as productive and reproductive labor split further and more distinctly apart. Davis argues that  
25 women "were the losers in a double-sense: as their traditional jobs were usurped by the burgeoning factories, the entire economy moved away from the home, leaving many women largely bereft of significant economic roles."

35. The structure of the passage is best described as:

- (A) A theory is described and supported by additional studies.  
(B) A theory and a screed against it are provided.  
(C) A theory is presented followed by a collection of opinions that impugn it.

- (D ) A theory is discussed and its author's credentials questioned.  
 (E) A theory is presented and ridiculed.

36.The passage suggests that one argument presented against D 'Emilio's theory is based on

- (A ) communism  
 (B ) identity politics  
 (C ) ethnocentrism  
 (D ) semantics  
 (E) sexism

37.In the second paragraph,the author mentions the Lowell Girls in order to

- (A ) illustrate how industrial capitalism eroded women's economic position  
 (B ) challenge an assertion about the importance of home based economies  
 (C ) rebut the arguments of D 'Emilio's critics  
 (D ) favorably contrast their position to that of third world garment workers  
 (E) support an assertion that workers' autonomy is more myth than reality

38.The passage suggests that Davis would be most likely to agree with which of the following?

- (A ) Industrial capitalism leads to independence and choice.  
 (B ) Minorities in particular had little freedom of choice. (C ) People without economic roles are disadvantaged.  
 (D ) Home-based jobs still account for a significant percentage of the overall economy.  
 (E) Domestic work should be paid.

39.Which of the following would provide the best title for the passage?

- (A ) Industrial Capitalism and the Oppression of Labor  
 (B ) D 'Emilio,Enloe,and Davis: A Reconciliation  
 (C ) A Rejection of D 'Emilio's Account of "Free Labor"  
 (D ) Women's Sacrifices for Industrial Capitalism  
 (E) Industrial Capitalism and Freedom For All

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**Questions 40–42 are based on the following reading passage.**

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Henri Matisse's *The Ochre Head* represents the artist's exuberant display of his new mastery of a technique once **peculiar** to Picasso. Matisse has learned to artfully separate color and drawing. The painting depicts a head and shoulders, a bouquet of red flowers in a dark blue vase sitting upon a bench, a framed drawing of a woman's head, and an unframed painting or drawing, also of a woman. But what is most striking about the painting is the way Matisse has begun to allow his colors and his forms to play freely, even while they are coordinated. The ochre of the head runs

5 out past the form. Bits of blue from the bench appear in the man's neckline or along his shoulder. The colors of the various frames and surfaces of the drawing on the wall overlap and refuse to be constrained by definite lines of form. Although

this technique is not given the kind of free reign Picasso allows it in his Cubist period or in works such as *Minoan*, it is still a stunning development for Matisse. And he seems aware of this fact. The painting's

10 composition references Picasso's *Still Life with Ancient Head* from 1925, signaling Matisse's awareness that he is borrowing from his younger colleague.

40.The author uses the word *peculiar* to mean which of the following?

- (A ) strange
- (B ) abstract
- (C ) unknown
- (D ) unique
- (E) appealing

41.The main idea of the passage is to

- (A ) describe an artistic work and its inspiration
- (B ) describe how Matisse surpassed Picasso (C ) describe how Matisse developed his style
- (D ) describe a representative example of Matisse's work
- (E) describe the influence of Picasso on the art world

42.According to the passage,all of the following are true of *The Ochre Head* EXCEPT:

- (A ) The artist did not color between the lines.
- (B ) Its arrangement is similar to that of a piece by Picasso.
- (C ) It is considered among the best of Matisse's work.
- (D ) Its colors are more constrained than those of *Minotaur*.
- (E) It depicts household objects.

**Questions 43–47 are based on the following reading passage.**

U S History textbooks are far too fact-based and even have the ability to make students feel as though all history is made up of “Quick-Facts” and diagrams,not dynamic events to be critically analyzed.Furthermore,it is often the case that textbooks are given undue authority in determining the curriculum ;many teachers simply “teach the book.”

This is particularly disturbing when considering the fact that state committees for choosing textbooks often treat them ,in the words of Sandra Wong,“more like encyclopedias of facts than as cultural products that

5 convey values and perspectives” when deciding which ones to pick.In her article “Evaluating the Content of Textbooks: Public Interests and Professional Authority,” Wong discusses how textbook committees are rarely concerned with

10the actual substance of the writing in the textbooks they evaluate,and are far more interested in things like “charts,illustrations,and introductory outlines.”

What,then,would be a better tool to use in the high school classroom than textbooks or timelines for creating an effective learning environment that could reflect the dynamic nature of historical study? Out of all the various alternatives— going to plays,hearing speakers, listening to music,using interactive online resources,elucidating connections to students’ personal lives by going to local history museums or having students write autobiographical essays,etc— the most promising is,

15 by far,film .Movies are a magnificent way into history for even the most resistant naysayer of historical study. Film is a hugely popular medium with endless numbers of historically based works — everything from documentaries to dramas—

20 that not only present facts,but dramatize the human relations behind those facts.

The main critique presented against the use of historical film in the classroom is,of course,the existence of rampant inaccuracies and biases laced throughout these films,not to mention the agendas of the

film makers themselves. However, some historians believe that these seeming flaws are actually part of the reason why film is an ideal teaching tool— not only does it allow students to see history come to life, and thus interact with it dynamically, as well as make history immediately accessible to a modern audience because of the techniques used in film making, but it can also foster deep critical thinking skills if instructors lead dialogues after film viewings about the inaccuracies, the biases, and all of the things that make the film not just a record of a historical event, but also a reflection of the modern moment.

43. Which of the following is NOT cited by the passage as an alternative method for historical study?
- (A) listening to music
  - (B) attending a public lecture
  - (C) volunteering at an archeology dig
  - (D) writing a personal statement
  - (E) watching a film
44. The purpose of the passage is to
- (A) support the film industry
  - (B) criticize government education policies
  - (C) advocate a new process for textbook adoption
  - (D) propose increased use of a particular didactic tool
  - (E) denigrate an established philosophy
45. According to the passage, a problem with state committee textbook selection is
- (A) the lack of education of the committee members
  - (B) misplaced priorities
  - (C) the dominance of larger states
  - (D) valuing perspectives instead of facts
  - (E) personal prejudices
46. The purpose of the last paragraph is to
- (A) acknowledge an insurmountable obstacle
  - (B) raise and undermine an objection
  - (C) reassert the need for alternative educational tools
  - (D) admit a flaw in a preferred alternative
  - (E) advocate more interactive instruction
47. The passage implies which of the following?
- (A) Students can benefit from exposure to inaccurate accounts of history.
  - (B) Students today prefer music to film.
  - (C) Students today are functionally illiterate.
  - (D) Students today prefer charts to opinions.
  - (E) Students today should not be exposed to political agendas.

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Questions 48–49 are based on the following reading passage.

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From assemblages of found objects to bizarre video installations and digital interactive experiments, much of contemporary art has been criticized as cold, unapproachable, impersonal, and emotionless. One link between the immediately appealing, expressive paintings that are often the most popular museum attractions and the “brainy” constructivist

5 school of art pioneered in the early twentieth century is the notion of *gesture* as an expressive tool.

Mark di Suvero's *Iroquois* (1983–1999) is composed of several industrial-sized I-beams. The materials are so heavy and large the artist used cranes and other construction tools to manipulate and connect the beams, all of which have been painted a bright red-orange. The result is an intruding work of almost architectural dimensions that one can immediately sense is terribly heavy and somewhat precarious, yet stable and balanced. As one contemplates *Iroquois*, walking in and around its

10 structure, backing away to see it from a distance, the linear forms become considerably more complex than one might presume. The tangled steel was obviously constructed with great care, yet each piece seems to threaten the viewer with its

weight and size, jutting out away from the central nexus, daring the entire form to topple over. At the same time, the piece seems to exude stability, balance, even serenity. *Iroquois* resonates with an energy born not of

15 the physical quality of the sculpture, which is quite passive and stable, but rather of the *gestural* quality of the forms.

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Consider each of the answer choices separately and indicate all that apply.

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48. Which of the following can be inferred from the passage?

- ☐ Some of the most popular museum attractions are contemporary art installations.
- ☐ Expressive paintings have been considered “brainy.”
- ☐ Seemingly cold and cerebral art can nevertheless make use of certain expressive tools.

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Consider each of the answer choices separately and indicate all that apply.

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49. Which of the following does the author assert about *Iroquois*?

- ☐ Paradoxically, it appears to be both stable and unstable.
- ☐ It uses gesture to evoke a sense of energy.
- ☐ Some interpret it as simpler than it really is.

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**Questions 50–53 are based on the following reading passage.**

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In his *Discourse on Inequality*, Rousseau posits that early social contract theories establish unjust social and political arrangements that provide only the appearance of legitimacy and equality.

In Rousseau's accounting, the beginnings of the social contract lie in the fears of the rich. In a state of nature, one in which there is no government or law to control the interactions of people, the rich would have great difficulty protecting the property that they possess. Thus, the rich turn to the mechanism of

5 the social contract to shore up the holdings Rousseau views as “hoarded.” The concept of a social contract is appealing to the poor, because the poor fear death in a state of lawlessness and thus seek protection. To obtain



assent to the contract, the

rich focus their rhetoric on a seeming equality of obligation by creating rules that apply equally to all members of society. This system, however, simply systematizes the “theft” the rich had perpetrated on the poor in the pre-law state of nature.

Rousseau then begins to develop his own vision of a social contract, through which he attempts to right these injustices. His first departure from earlier theorists is in the formation of the sovereign. Rather than members of the state surrendering their rights to another person— an irrational

course of action tantamount to surrendering oneself into slavery— they surrender their right to all members of the society and thus to no one. Rousseau refers to this sovereign as the “general will” and it has the task of legislating for the new civil society that is created in the contract.

Unlike early social contract theories, Rousseau’s version conceives of property rights that allow for rights of first occupancy to justify claims, rather than rights of the strongest. In this system, property can be taken only if it has not been previously occupied and only to the degree necessary for the **subsistence** of those taking it, measures intended as a check to the hoarding of property by force enshrined in earlier contract theory.

50. Which of the following societies would Rousseau be likely to endorse?

- (A) A society in which there is no government or law to control how people interact with each other.
- (B) A society in which a primary leader is elected through a fair democratic process.
- (C) A society in which there is only communal property, rather than private property.
- (D) A society in which the social contract has been dismantled and replaced with rights of first occupancy.
- (E) A society in which a homeless family could legally move into an empty house they did not purchase.

51. It can be inferred from the passage that Rousseau would believe which of the following of a society of men and women living without the primary structures of civilization?

- (A) Their wealth would inevitably be equally distributed across the population.
- (B) Those with more wealth would be at risk of losing it to those with less.
- (C) Property would not be hoarded by those who had the most power.
- (D) The social contract would not be created in order to protect the material goods of the wealthy.
- (E) Property would only be taken if it had not been previously occupied and was necessary for the subsistence of those taking it.

52. Select the sentence in the second paragraph that explains how a privileged group is able to secure widespread approval for the systematized “theft” it achieves through hoarding.

53. In the context in which it appears, *subsistence* most nearly means:

- (A) survival
- (B) enrichment
- (C) protection
- (D) help
- (E) opposition

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Questions 54–56 are based on the following reading passage.

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In the twenty-first century, *terrorism* has become a common term in the day-to-day political vernacular.

How ever, despite its prevalence in everyday conversation, the term *terrorism* is not easily defined.

First, there is the question of target. There is a large debate over what the target of terrorism must be. Many writers believe that the targeting of "innocents" is a key component of terrorism. Douglas Lackey writes, "... the common soldier is not a terrorist, because the majority of his victims are soldiers, and a minority of his victims are civilians." All bombs kill things in their target radius regardless of military status; they are indiscriminate by nature. Lackey goes on to argue that what makes a bombing campaign constitute indiscriminate killing is the

targeting of an area with a high ratio of non-military units to military units. Thus, discrimination is not in the weapons used, but in the targets decided upon.

A second controversy is that of circumstance; that is, whether or not terrorist acts must be performed in times of peace, or if they can include acts perpetrated during war. Some believe that even in a war, such as World War II, terrorist actions can be undertaken. However, there is

a viewpoint that in war the right to certain types of attack expands, making actions that might be considered terrorist in other contexts (such as surprise attacks or raids) justified.

The final controversy is that of perpetrator size. This debate largely manifests itself in the question of whether or not state actors can be accused of terrorist action. While Ariel Merari acknowledges the possibility of state sponsored terrorism, he decides to narrowly define terrorism as a body of violence perpetrated by sub-state insurgent groups. He does so because, "if the

definition of terrorism is equally applicable to nuclear war, conventional war, and guerrilla warfare, the term loses any useful meaning." Unlike some theorists, Merari does not reject state actors because of a pro-state bias, but rather concludes that the broader the term becomes, the less useful it becomes in a dialogue.

54. Lackey and Merari would be most likely to agree on what judgment regarding terrorism?

- (A) That an individual soldier in a country's military would not typically commit terrorist acts in the course of duty.
- (B) That an attack that targeted primarily civilians, rather than members of a military, would necessarily be a terrorist attack.
- (C) That the term *terrorism* is very difficult to define.
- (D) That terrorism can only be carried out during peacetime.
- (E) That a member of an elite branch of a given country's military could not be said to commit a terrorist act.

55. In the context in which it appears, *sub-state* most nearly means:

- (A) operating under a government's orders
- (B) terrorist
- (C) insurgent
- (D) anarchist
- (E) nongovernmental

56. Each of the following is mentioned in the passage as a reason that the term *terrorism* is difficult to define EXCEPT:

- (A) the nature of the targets of the act
- (B) its prevalence in everyday conversation
- (C) whether the act in question occurs during wartime or peacetime
- (D) whether governmental bodies can be terrorists
- (E) the fact that its usefulness as a term is inversely proportional to its inclusiveness

**Questions 57–58 are based on the following reading passage.**

The African American writer and social critic James Baldwin grew up as an outsider both to the language and culture of power, and yet achieved a balance between self-expression and the language of power. In the 1930's, Hollywood movies portrayed an optimistic, capitalist, white America that dealt with white issues and employed white actors. As a child, Baldwin felt acutely separated from the culture of power. In "Conigo Square," Baldwin opens his essay with an important idea: "A child is far too self-centered to relate to any dilemma which does not, somehow, relate to him."

- 5 Watching the films of the dominant culture, Baldwin attempted to relate the information to his own life, connecting with it however he could. Rather than blindly accept the storylines in the movies, when Baldwin saw a staircase in *A Tale of Two Cities*, he
- 10 thought, "I knew about staircases."

At the same time, Baldwin distrusted the culture of power: "The civilized ... do not intend to change the *status quo* ... these people are not to be taken seriously when they speak of the 'sanctity' of human life, or the 'conscience' of the civilized world."

Consider each of the answer choices separately and indicate all that apply.

57. It can be inferred from the passage that Baldwin would agree with which of the following about a 1930's film that dealt only with African American issues and employed only African American actors?

- ☐ It would be significantly better than most Hollywood movies from the 1930's.
- ☐ It would suffer from the same kind of problems as the more typical 1930's Hollywood movies.
- ☐ It would be less likely than most other 1930's Hollywood movies to reinforce the predominant culture.

58. Baldwin's quotation from "Conigo Square" is used primarily in order to illuminate what aspect of 1930's America?

- (A) the culture of power that Baldwin mistrusted
- (B) the fact that Hollywood movies were primarily optimistic and centered on white culture
- (C) the idea that America was hungry for a writer such as Baldwin, because its films focused only on white America
- (D) the alienating effect of films of the era on black children
- (E) the concept that children are incapable of deriving any educational value from films they can't relate to

**Questions 59–62 are based on the following reading passage.**

The Parthenon has long been regarded as one of the great architectural and artistic products of the High Classical Period. Yet, scholars have struggled to reach a consensus interpretation for the meaning of the Parthenon Frieze. The study of this particular sculptural element of the Parthenon, a continuous band of sculpture that ran round the top of the

- 5 building's temple-chamber, has proven quite difficult.

Today only 423 feet of the original 524 survive, and of those, 247 feet are housed in the British Museum in London. Another large section is now in the Acropolis Museum in Athens, and still other pieces reside in

exhibits throughout Europe, making it a difficult task to discuss, let alone experience the unified whole the designers wished the audience to witness—a key element in deciphering any work of art.

Denied the opportunity to study the frieze as it existed in antiquity, scholars are faced with the burden of reconstructing the visual experience of the monument before they can even begin interpreting it. To do so, an inventory is taken of characters and figure-types represented on the frieze and their arrangement. Then this inventory is compared to historical precedents and placed in its contemporary context in the hopes of using prior examples to decipher its meaning. Considering the various fragments of the Parthenon frieze as a whole and comparing it to other Greek artworks, two aspects of the arrangement immediately strike the informed viewer.

First, it is clear that the frieze is meant to be thought of as a continuous whole. This is particularly interesting because it is completely unprecedented in Greek art. Continuous friezes on the faces of Greek temples generally depicted single subjects, but if continued over all four sides of a building, the four stretches of the frieze would generally be thematically separate.

The second unique aspect of the Parthenon frieze has to do with the fundamental nature of Greek art; namely that all works of art prior to the Parthenon frieze depicted only scenes from myth and legend. Yet, in this relief, for the first time in the history of Greek art, we find mortals, leading some scholars to the conclusion that what is depicted is a specific event that actually took place at a specific time and place.

59. In the context in which it appears, the word *informed* most nearly means:

- (A) assiduous
- (B) artistic
- (C) unique
- (D) erudite
- (E) scientific

60. Which of the following would be the best title for the above passage?

- (A) The Parthenon Frieze: An Insoluble Sculptural Mystery
- (B) The Parthenon Frieze and Methods of Artistic Interpretation
- (C) The Parthenon Frieze: Sui Generis Stonework
- (D) Mortals in Greek Art
- (E) The Parthenon Frieze: Continuity of Character

61. All of the following can be inferred about the Parthenon from the passage EXCEPT:

- (A) It was constructed in the High Classical Period.
- (B) It has been seen as a great work of art.
- (C) It featured a temple-chamber.
- (D) It is not known how it looked at the time of its construction.
- (E) It contained one-of-a-kind sculptural elements.

62. It can be inferred from the passage that which of the following would be unique in the world of Classical Greek art and architecture if it were discovered to have been created just after the Parthenon?

- (A) a painting featuring the goddess Athena springing forth from the head of her father, Zeus
- (B) a room featuring a frieze around the top that depicted a single, continuous narrative on all sides of the room
- (C) a drama that used the famous myth of Persephone to provide a trenchant commentary on Greek life

- (D ) a frieze featuring a number of different characters and figure-types  
(E) a large mural depicting a beautiful Greek youth crushing grapes to make wine

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**Questions 63–64 are based on the following reading passage.**

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A single short story can suggest a desired response from the reader. It is a difficult task, though, to create a world within a single short story and then repeat this world again in other stories while maintaining a consistent flow of ideas. Many authors prefer to use the same setting, indeed, often the same characters in each story. Isabel Allende's *Diez Cuentos de Eva*

- 5 *Luna* comes to mind. In these stories, Allende uses the small town of Agua Santa as the setting for the entire collection.

*Woman Hollering Creek* is a collection of short stories by Sandra Cisneros. Rather than using the same characters or setting throughout the collection, Cisneros takes a different approach to relating her stories to one another. Much of the burden, in fact, is placed on the reader, for the characters change each time, as does the setting. Furthermore, while the characters are

- 10 largely Mexican American immigrant women, each character presents a distinct style and literary voice. What these works have in common is more intuitive; mood, circumstance, time, tone, and imagery all play a role in creating the world in which the stories take place.

63. The author of the passage would be most likely to agree with which of the following statements?

- (A ) Short story collections depend on the reader to find the common thread that ties the stories together. (B ) Isabel Allende uses the same setting for the majority of her fiction. (C ) It is possible to create a coherent short story collection if the stories take place in vastly different times and places. (D ) Intuition is a more important aspect of Sandra Cisneros's writing than the characters or the setting. (E) The best short story collections feature some through line that the reader can follow and that connects the various stories.

64. According to the passage, which of the following characterizes both short stories by Isabel Allende and short stories by Sandra Cisneros?

- (A ) similarities in tone among the stories  
(B ) similarities in time among the stories  
(C ) similarities in characters among the stories  
(D ) similarities in setting among the stories  
(E) none of the above

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**Questions 65–66 are based on the following reading passage.**

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Scottish economist Adam Smith's *The Wealth of Nations* heralded— or caused— the market-based economic system that has increasingly become the norm since the book's publication in 1776. Some say that Smith's magnum opus was to economics as Newton's *Principia Mathematica* was to physics or as Darwin's *On the Origin of Species* was for biology.

- 5 Certainly the book made its impact in the early United States.

1776 predates wide usage of the term *capitalism*, now commonly associated with Smith, and which

Smith refers to as a “system of natural liberty.” Smith presented what we today consider Economics 101: supply and demand, and the importance of specialization and the division of labor. He also posited that individuals pursuing their own self-interest could unintentionally create a more just society by so doing— an idea sometimes referred to as the “Invisible Hand.”

Even Smith’s critics do not deny the book’s immense influence. Murray Rothbard levels the criticism that *The Wealth of Nations*, in fact, eclipsed public knowledge of all economists— better ones, he says— before Smith.

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Consider each of the answer choices separately and indicate all that apply.

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65. Which of the following statements is not in contradiction with the opinions of Murray Rothbard as expressed in the passage?

- ☐ Smith was possibly the third best economist of all time.
- ☐ *The Wealth of Nations* should not have been as influential as it was.
- ☐ Adam Smith was not particularly influential.

66. Which of the following would be an example of the “Invisible Hand” as described by Adam Smith?

- (A) A group of moviegoers who are able to get cheaper tickets for a film by buying their tickets as a group.
- (B) A society in which the division of labor frees certain people to pursue careers that might seem impractical in a non-capitalist society.
- (C) A university in which classes are first-come, first-served, thereby equitably distributing courses according to the passion and dedication of students.
- (D) A market in which there are more buyers than sellers, thus forcing the price of goods upwards.
- (E) A stock exchange in which each trader acts according to a different set of information, such that certain commodities become hyped and their prices overinflated.

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Questions 67–68 are based on the following reading passage.

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Fame and fortune are often associated with virtue, industry, and a host of other attributes. However, random strokes of fate often determine such success and said com only perceived virtues prove irrelevant. For instance, decades after her death, Coco Chanel remains the epitome of French fashion and her name, as well as the company she founded, is known throughout the world. Yet, few realize that she, while undeniably talented, initially succeeded by leveraging her

5 status as a courtesan. As a company owner, it would be an understatement to say that she was not known for her generous treatment of her employees. During the Nazi occupation, she lived a privileged life at the Hotel Ritz and her lover at the time was a German intelligence operative.

Conversely, there is the example of Madeleine Vionnet, a professional contemporary of Chanel. She is often credited with permanently transforming fashion through her use of the bias cut— cutting material against the grain of the fabric. In the 1930’s, her gowns were worn by Hollywood stars, and her standing was second to none. She was also, in many ways, an early feminist, establishing largely unheard of employee benefits— such as day care and medical

care— for her largely female staff. In addition, she lobbied for fashion copyright protections. When the 15 Second World War broke out, she closed her business and simply retired. Today, she is largely unknown

outside of the fashion industry.

67. The author wrote the passage to posit which of the following?

- (A) that the relationship between virtue and success is inverse
- (B) that an inferior designer was more successful than a superior one
- (C) to contrast the aesthetic of Chanel to that of Vivionnet
- (D) to suggest that no causal relationship exists between personal qualities and professional legacy
- (E) to contrast the difference between transitory and lasting success

68. The author discusses the employee benefits offered by Vivionnet in order to

- (A) emphasize Vivionnet's anti-Nazi politics
- (B) illustrate Vivionnet's admirable qualities
- (C) highlight Chanel's reputed drug use and collaboration
- (D) demonstrate the economic burden of French socialist policies
- (E) provide details that bolster Vivionnet's feminist credentials

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**Questions 69–70 are based on the following reading passage.**

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During the 1960's and 70's, scientists were concerned and puzzled by a large gap in the human fossil record. The "aquatic ape theory" gained prominence as an explanation for this gap. This theory posited that primitive humans were forced toward a littoral lifestyle by competition for arboreal resources. Analogies were made to seal populations, who sleep on

5 land at night but spend most of their days in coastal waters. Proponents pointed to various physiological human attributes, such as bipedalism and the webbing between human toes, as extant adaptations.

However, the aspect of the theory that captured the public imagination and undoubtedly boosted its standing was the point that this hypothesis explained human hairlessness; as with dolphins, this streamlining would facilitate swimming and diving. Proponents noted that the remaining body

10 hair would match the flow of water, and extreme advocates explained the gender difference in hair by suggesting that females much more rarely ventured out of the shallows and into the putatively more dangerous forests and savannahs.

Nonetheless, despite the popular stature of the theory, the scientific community almost unanimously rejects it as mere conjecture not only because of the lack of supporting evidence but also because its claims do not withstand scrutiny. While bipedalism does facilitate swimming, it is even more of an  
15 advantage in terrestrial pursuits. Further, biomechanical analysis indicates that humans remain such inadequate swimmers that they could not so succeed. As for hairlessness, critics point out that other semi-aquatic mammals actually

20 have dense fur and/or barrel-shaped torsos for heat retention. Today, the theory, while still championed by a prominent writer but non-scientist, has no serious support among mainstream-trained paleoanthropologists.

69. The passage implies that, according to the theory, a male aquatic ape would most likely do which of the following?

- (A) spend almost all of its time in the water
- (B) spend its nights in the water, but its days partly on land
- (C) spend its days partly in the water, but its nights partly on land
- (D) spend its days mostly in the water, but its nights on land
- (E) spend almost all its time on land

70. The author describes a remaining proponent of the theory as a “non-scientist” in order to do which of the following?

- (A) cast doubt upon her objectivity
- (B) tout the superiority of common sense over academics
- (C) cast doubt upon her expertise
- (D) cast doubt upon mainstream paleoanthropologists
- (E) illustrate the sexism of mainstream scientists

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**Questions 71–72 are based on the following reading passage.**

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The Tokugawa period Japan (1603–1867) serves as a laboratory for organizational behavior historians for the same reason that Iceland works for geneticists— isolation removes extraneous variables. The Tokugawa shoguns brought peace to a land of warring feudal lords. To preserve that tranquility, the Tokugawa shogunate forbade contact with the outside world, allowing only a few Dutch trading ships to dock at one restricted port. Domestically, in pursuit of the same

5 goal, the social order was fixed; there were four classes— warriors [samurai], artisans, merchants, and farmers or peasants— and social mobility was prohibited. The ensuing stability and peace brought a commercial prosperity that lasted nearly two hundred years.

However, as psychologists, social historians, and Biblical prophets have all observed, in varying ways, humans inevitably fail to anticipate unintended consequences. In the Tokugawa period, the fixed social hierarchy placed the samurai on top; they and the government were essentially supported by levies on

10 the peasantry, as the other two classes were demographically and economically inconsequential. However, prosperity brought riches to the commercial classes and their numbers burgeoned. Eventually, their economic power dwarfed

that of their supposed superiors, the samurai. Simultaneously, the increasing impoverishment of the samurai adversely affected the finances of the peasantry and the government. By the early 19th century, this imbalance

15 between social structure and economic reality eroded the stability of the society. This condition, in conjunction with increasing pressure for access from foreigners, such as Admiral Perry in 1853, led to the collapse of the shogunate in 1867. In short,

20 the success of this imposed order led to its undoing through consequences that were beyond the ken of the founders.

71. The primary objective of the passage is to

- (A) compare the Tokugawa period to modern Iceland
- (B) demonstrate the folly of imposing a social order
- (C) show how American naval power ended Japan’s isolation
- (D) illustrate how a society can model a common human failing
- (E) argue that commerce is more successful than militarization

72. Which of the following would provide further support for the main reason cited for the decline of the Tokugawa period?

- (A) a samurai becomes a successful merchant
- (B) a successful artisan becomes a samurai
- (C) a samurai must work as a bodyguard for an artisan
- (D) a peasant revolt against the samurai
- (E) a military invasion by American marines



**Questions 73–74 are based on the following reading passage.**

The War of the Spanish Succession, 1701–14, began as a quarrel over whether an Austrian Habsburg or French Bourbon would succeed the childless Charles II of Spain. The conflict eventually embroiled most of Europe, with Austria, England, Holland, and Prussia the major powers opposing France, Spain, and Bavaria. For centuries afterward, school children learned of the Duke of Marlborough's victory at Blenheim, the military brilliance of Prinz Eugen of Savoy, an

5 independent territory east of France, as well as the opposing brightness of Louis XIV of France, known as the Sun King, who also built the famous palace at Versailles. Today, however, virtually all those names would elicit only blank stares.

Although this war and its personages have now vanished into obscurity, its effects greatly affected the course of European and world history. The Treaty of Utrecht, which ended the war in 1714, ceded the Spanish island of Gibraltar to England. The "Rock of Gibraltar" became an invincible British fortress that

10 controlled the Mediterranean and thus was of paramount importance in both world wars. Conversely, the same treaty elevated Prussia to a kingdom, thus setting in motion a chain of events that led to a unified Germany under a Prussian Kaiser

15 instead likely of one governed by the Austrians, arguably making the bloodshed that consumed the 20th century more

73. The author implies that a possibly negative aspect of the Treaty of Utrecht was

- (A) awarding Gibraltar to the British
- (B) reducing the Duke of Marlborough to obscurity
- (C) elevating Prussia to a kingdom
- (D) failing to resolve the Spanish succession
- (E) unifying Germany

74. Which of the following must be true, according to the passage?

- (A) Not all of the important military personages were from major powers.
- (B) The battle of Blenheim was the most important engagement of the war.
- (C) England was the victorious power.
- (D) France was defeated in the war.
- (E) The transfer of Gibraltar was the most important result of the war.

**Questions 75–76 are based on the following reading passage.**

Michael Lew is, the American journalist and non-fiction writer, originally studied art history as an undergraduate and worked for a prominent art dealer before obtaining a masters degree in economics at the London School of Economics. After a short stint at Salomon Brothers, he wrote *Liar's Poker*, which became a tremendous success. However, his fame and fortune continued to arc upward with the publication of *Moneyball* and *The Big Short*. Some argue that his education

5 in the humanities, in addition to finance, greatly contributed to the popularity of his work. However, most adherents of that view are ensconced in ethereal rather than commercial disciplines.

An alternative explanation exists. Although baseball and Wall Street are not commonly associated, Lew's works concerning both those topics share more than the common theme of lucre. All the

books cited above focus on mavericks “gam[ing] the system.” Lewis’s protagonists, such as Billy Beane of the 10 *Moneyball*, are smart non-conformists who rebel against monolithic systems by exploiting inherent inconsistencies. Such a theme echoes the American nation-building construct— lone, free individuals winning against great odds by employing common sense and ingenuity. This is a story line that Americans hear from birth; it is no wonder 15 that Lewis’s books are popular despite subjects that are not necessarily of universal interest. Further support for this thesis is that *Moneyball* became a major motion picture and a film of *Liar’s Poker* is in development. Of course, unlike baseball games, such 20 debates can never be definitively scored.

75. The author primarily does which of the following?

- (A) contrasts two opposing theories for a process
- (B) discusses two suppositions and implicitly favors the latter
- (C) details two programs and definitively prefers the latter
- (D) describes a writer’s work and its dearth of popularity
- (E) outlines the biography of a writer and critiques his work

76. The author does all of the following EXCEPT:

- (A) employ an idiomatic expression
- (B) describe the protagonists in question
- (C) reference popular culture as evidence
- (D) discuss the parallels shared by two professions
- (E) mention his subject’s formative influences

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**Questions 77–78 are based on the following reading passage.**

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The term *free rider* originates from the idea of someone who rides public transportation without paying the fare. The *free rider problem* is what results when too many people do this: the transit system will go bankrupt. More broadly, the *free rider* is someone who uses or enjoys the benefits of something without paying, or takes more than his or her share of a public 5 good. *Free riders* can cause others to curtail their own contributions, not wanting to be taken advantage of. In some cases, the *free rider problem* is viewed as a necessary cost of government. When citizens pay for national defense or environmental protection, everyone benefits, even those who evade paying taxes.

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Consider each of the answer choices separately and indicate all that apply.

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77. Which of the following examples matches the definition of a *free rider problem* as described in the passage?

- ☐ A skateboarder grabs onto the back of a car and is able to travel effortlessly for over a mile before letting go.
- ☐ A senior citizen pays less for a movie ticket than do the other people in the theater.
- ☐ A yearly school bake sale based on the honor system is suspended when too many people take food without paying.

78.The author of the passage would be most likely to agree with which of the following statements?

- (A) *Free riders* cannot be blamed for their actions, because they are an inevitable part of any government.
- (B) *Free rider problems* are not worth worrying about, because they are an inevitable part of any government.
- (C) There are at least some situations in which the *free rider problem* should not be viewed as an inevitable part of government.
- (D) National defense is a perfect example of why *free rider problems* need to be stamped out as quickly as possible.
- (E) *Free riders* are morally at fault, and ought to be punished.

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Questions 79–80 are based on the following reading passage.

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In 2010, a team of biologists led by Svante Paabo announced evidence that modern humans interbred with Neanderthals some 60,000–100,000 years ago. These researchers compared the full sequence of Neanderthal DNA to that of five modern humans from China, France, sub-Saharan Africa, and Papua New Guinea, and looked for DNA shared by both Neanderthals and non-African modern humans, but not by sub-Saharan Africans. Because Neanderthals and modern humans are known to have diverged hundreds of thousands of years before modern humans left Africa,

- 5 Paabo attributed any such common DNA to interbreeding in Eurasia. Paabo's team announced that the modern humans from China, France, and Papua New Guinea all have the same proportion of Neanderthal DNA, and inferred that interbreeding with Neanderthals must have taken place before the ancestor population of those Eurasians divided. Paabo maintained that these two events, the migration of modern humans out of Africa and the
- 10 division of the Eurasian population, mark the interval during which the interbreeding must have taken place, and that for roughly forty thousand years of that window, Neanderthals and modern humans lived near one another in the Middle East.

The team's conclusions were answered with skepticism on a number of fronts. Critics pointed out that an earlier report reached similar conclusions based on Neanderthal samples later found to be contaminated with

15 DNA from modern humans. Paleontologists and archaeologists charged that the conclusion was unsupported by archaeological evidence. Further, Paabo's team found evidence only of Neanderthal DNA in modern humans, not of

20 modern human DNA in Neanderthals, but critics claim that interbreeding would result in gene flow in both directions.

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Consider each of the answer choices separately and indicate all that apply.

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79.The passage implies that which of the following claims is true?

- ☐ Modern humans and Neanderthals share a common ancestor.
- ☐ Modern humans and Neanderthals interbred.
- ☐ Modern humans and Neanderthals lived near one another approximately 80,000 years ago.

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Consider each of the answer choices separately and indicate all that apply.

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80. The passage suggests which of the following is true of Paabo's critics?

- ☐ they doubt Paabo's integrity
- ☐ they ignore D N A evidence
- ☐ they sometimes appeal to archaeological evidence

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Questions 81–82 are based on the following reading passage.

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Though an echo is a fairly simple acoustic phenomenon—a reflection of sound waves off some hard surface—it occurs only under very specific circumstances. Imagine a listener standing at the sound source. The reflecting object must be more than 11.3 meters away from the sound source, or the echo will return too soon to be distinguishable from the original sound. A reflecting object more than about 170 meters, on the other hand, will rarely produce an audible echo, since sound dissipates with distance. Further, multiple surfaces each reflecting the same original

- 5 sound to the same listener will likely not produce an echo, but a reverberation, a persistent sound gradually decreasing in amplitude until the listener can no longer hear it. Common though echoes are then, it is unsurprising that some sounds seem to
- 10 produce no echo.

- A centuries-old tradition holds that a duck's quack does not echo. Scientists in the Acoustics Department of the University of Salford set out to test and explain this claim. They recorded a duck, Daisy, first in an anechoic chamber filled with sound-absorbing fiberglass wedges, then in an echo chamber with the acoustical properties of a small cathedral. The
- 15 sound of the duck quacking in the anechoic chamber was clearly different from the sound of the duck quacking in the echo chamber, but the researchers acknowledged that it would be very hard to recognize an echo in the latter recording without having very recently heard the former. Partly this is because a quack isn't a single burst of sound, but fades in and out, so that the beginning of the echo might blend with the end of the original sound. Partly it is because a quack is just not very loud. The Salford researchers also
- 20 speculate that most people may simply not encounter ducks in proximity to reflectors such as buildings or mountains. A further complication, though one the researchers leave unremarked, is that people generally hear ducks in flocks, where one quack might be indistinguishable from the echo of another.

81. According to the passage, all of the following make an audible echo unlikely EXCEPT:

- (A) a reflecting surface too close to the original sound
- (B) a reflecting surface too far from the original sound
- (C) multiple reflecting surfaces
- (D) multiple listeners
- (E) sound-absorbing materials

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Consider each of the answer choices separately and indicate all that apply.

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82. The passage suggests that which of the following would propagate echoes?

- ☐ an anechoic chamber
- ☐ a cathedral

☐ a mountain

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Questions 83–85 are based on the following reading passage.

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Simone de Beauvoir's feminism was heavily informed by existentialist ethics. Within this frame of thought, good and evil are expressed in human beings' transcendence and "immanence," respectively. Human existence can only be justified via continually expanding into the future by engaging in freely chosen projects — i.e., transcendence. Transcendence

is thus a general goal for human beings, while its opposite— immanence— is considered a degradation of existence, from "liberty into constraint." Freely chosen, immanence is a moral fault, but when inflicted, it is

5 described as "oppression." In a social environment where women are prevented from choosing and engaging in serious projects because of their status as women, their ability to transcend is systematically thwarted, so transcendence becomes a

10 specifically feminist goal. De Beauvoir explains that women are viewed as intrinsically passive and immanent, in opposition to men who are meant to be active and transcendent.

In the society observed by de Beauvoir, "[women] live ... attached through residence, housework, economic condition, and social standing to certain men— fathers or husbands... " It is specifically women who are attached to men— not men to women nor women and men

15 to each other. As de Beauvoir notes, the nature of this relationship, overlapping the assumption that men are the active transcendent half of humanity, leaves women in a position of forced immanence.

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Consider each of the answer choices separately and indicate all that apply.

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83. According to the passage, Simone de Beauvoir believed which of the following?

- ☐ In society, women are attached to men.
- ☐ Women are intrinsically passive and immanent.
- ☐ Self-constraint is worse than imposed constraint.

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Consider each of the answer choices separately and indicate all that apply.

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84. According to the passage, *immanence* is always

- ☐ a moral fault
- ☐ a degradation of existence
- ☐ oppression

85. The passage could best be described as which of the following?

- (A) an explanation of existentialist ethics and transcendence
- (B) an explanation of feminist theory and female immanence
- (C) a diatribe about immanence and a social injustice
- (D) a description of a philosopher's influences and framework
- (E) an outline of social structure and conflicts

**Questions 86–87 are based on the following reading passage.**

- What differentiates science and non-science? According to the modern definition of science, the Ancient Greeks were not scientists but rather philosophers. Their investigations were performed in an unscientific manner, as is illustrated by Aristotle and his conclusions about the properties of water. Before studying water, Aristotle discovered that matter existed in three main categories: solid, liquid, and gas. He concluded that a solid was the least expanded of the three and verified this by seeing that a solid always sank in a liquid of the same type. However, when Aristotle encountered water, he saw that it had properties that contradicted his previous categorization. In order to reconcile this disparity, he postulated that water was an exception and that the shape of solid water caused it to stay afloat. This, of course, is incorrect.
- To the contrary, the studies of Galileo Galilei followed a certain self-made doctrine for gathering data and performing scientific experiments. Galileo's method forced one to first form a hypothesis, then design an experiment to confirm or deny this hypothesis, and then accept or discard the hypothesis based on one's findings. Using this method, Galileo disproved many commonly held misconceptions about the rules of physics. In one of his more famous experiments, Galileo hypothesized that the Earth's gravitational field resulted in the same acceleration of all objects, regardless of mass. To prove this, he dropped two iron balls of different masses from an elevated place and showed that gravity pulled on both masses evenly. This experiment disproved the commonly held belief (at the time) that an object with greater mass would fall to the ground more quickly.

86. The author's primary purpose in writing this passage is to

- (A) explain the modern distinction between science and non-science via historical examples
- (B) criticize the research methods employed by the Ancient Greek philosophers
- (C) illustrate the importance of following the scientific method as invented by Galileo Galilei
- (D) compare and contrast the historical definition of science with the modern-day definition
- (E) argue that the findings of Galileo are more important than those of Aristotle

87. Which of the following can be properly inferred from the passage?

- (A) Solid water has the same shape as other solid forms of matter.
- (B) When dropped from the same height, an object with greater mass will fall to the ground more quickly than an object with less mass.
- (C) One cannot be both a scientist and a philosopher.
- (D) If Aristotle had followed Galileo's method, he would have rejected his hypothesis that solids were the least expanded form of matter.
- (E) In the absence of the scientific method, one cannot disprove commonly held misconceptions about the rules of physics.

**Questions 88–90 are based on the following reading passage.**

Lousia May Alcott's *Little Women* opens to a common scenario—the women knitting at home and waiting for news from the man of the family, who is at the war front. The family dynamics of *Little Women*, as a microcosm of the larger society, are marked by explicitly articulated male dominance. First of all, the division of labor has it so that women are confined to the domestic sphere while men step into the public sphere and engage in activities there, returning to the

5 domestic sphere at night to be cared for by their spouse or female children. A Scott describes the character of Meg, a young wife, as “often ... lonely,” with her husband “absent till night, and nothing to do but sew, or read, or potter about.”

Marmee later tells Meg that she ought to “take [her] part in the world’s work,” even though she is a woman. Ultimately, however, “taking her part in the world’s work” meant no more than talking to her husband about politics whilst remaining at home, allowing him to continue to be the mediator between Meg’s individuality and the world at large. Chapter 38 of the novel wraps up the issue by concluding that “a woman’s happiest kingdom is home, her highest honor the art of ruling it [as a] wise wife and mother,” such position being “the sort of shelf on which young wives and mothers may consent to be laid, safe from the restless fret and fever of the world.” Some have read A Scott’s romantic glorification of women’s confinement as sarcastic, but either way, her loving readers must have agreed with the statement, for the novel has never been out of print.

88. The primary purpose of the passage is to

- (A) explain the continued popularity of a novel
- (B) detail the domestic confinement of 19th century women
- (C) analyze the sociological implications of a work of art
- (D) argue for the emancipation of women
- (E) indict the politics of a literary work

89. The passage implies that for a woman to effectively “take [her] part in the world’s work,” she must do which of the following?

- (A) talk to her husband about politics
- (B) rule her home
- (C) sew, read, and potter about
- (D) find a mediator to interact with the world at large
- (E) leave the house

Consider each of the answer choices separately and indicate all that apply.

90. The passage implies which of the following about American society at the time that *Little Women* depicts?

- ☐ it was wartime
- ☐ it glorified women’s confinement
- ☐ the vast majority of public activities took place during the day

Questions 91–92 are based on the following reading passage.

*Falsifiability* is the term coined by Karl Popper for the idea that a hypothesis or theory addresses the observable world only insofar as it can be found false as the result of some observation or physical experiment. For instance, the proposition “All cats have fur” can easily be proven false with the observation of a single hairless cat. The proposition “The world will end in the year 3035” is impractical to falsify, but still passes the test of falsifiability in that there exists the logical possibility that 3035 will come and go without the world ending. To the contrary, it is possible to posit

5 that everything that happens is the will of Zeus. No matter what experiment we design— such as praying to Zeus to give us the answer or daring Zeus to strike us with lightning— we can always infer that the result is the will of Zeus. Such a proposition, as

10 conceived here, is not falsifiable. Popper claimed that a falsifiable theory is the only kind that can truly be scientific, or at least useful to the scientific community.

By that logic, we can also say that no theory should be formed that has no chance of being true. However, seeing as that kind of theory is much less likely to be formed, it is understandable that Popper does not devote that much time to the criterion of  
15 “confirm ability.”

91. According to the passage, which of the following does not meet the criteria for falsifiability?

- (A) All birds are black.
- (B) Earth is the only planet in the universe with intelligent life.
- (C) It rains on Mars every day.
- (D) The sun will explode in 100,000 years.
- (E) No human being lives forever.

92. To which of the following is the author most likely to agree regarding “confirm ability”?

- (A) It is a more important theory than *falsifiability*.
- (B) It does not have much practical, scientific use.
- (C) It applies to a broad range of theories.
- (D) It is an unreasonable idea.
- (E) Popper should have developed this idea along with *falsifiability*.

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**Questions 93–97 are based on the following reading passage.**

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A dictionary definition of the term *political* might read something like, “of or concerned with government, political parties, or politicians.” Such a definition is not precisely wrong, but rather is outdated and falls short by not accounting for what Nancy Fraser calls “the shift from a repressive model of domination to a hegemonic one.” If at some point we believed

5 government operates exclusively through law and the threat and enforcement of concrete punishment, such as imprisonment, monetary penalties, etc., and called this and all that directly influenced it “politics,” we have now acknowledged the role of hegemony, which legitimizes law and supports the exercise of power.

This is significant because, under the first definition, the only cultural products that can be said to be political must explicitly address issues of political partisanship or governance, while under the  
10 second definition, all cultural objects can be traced to a certain ideology— in accordance, negotiation, or opposition to hegemony— and therefore be political.

But we do not feel that we are discussing politics or viewing politics all the time, even if we are, according to our definition of “the political.” This is because even if all subject matter is (at least potentially) political, not all talk is so. When conducting her study on political talk, Nina Eliasoph focused not as much on what people talked about, but rather on how exactly they talked about things: “whether  
15 speakers ever assume that what they say matters for someone other than themselves, ever assume that they are speaking in front of a wider backdrop.” She cited Hanna Pitkin in concluding that “public-spirited conversation happens when citizens speak in terms of ‘justice.’” To use an example from the theater, then, we can say that when a director decides to frame her production of *A Streetcar Named Desire* as the story of a woman who is losing her mind and



20 does not get along with her aggressive brother-in-law, she is actively depoliticizing the story, whereas she is actively politicizing it if she decides to frame the narrative as one example of the devastating effects of an old bourgeois morality, a changing economic system and the social valuing of an abusive model of masculinity.

93. The second paragraph of the passage serves to

- (A) offer an alternative to the definitions previously presented
- (B) discuss a revision of the definitions previously presented
- (C) delineate the distinction between the definitions previously presented
- (D) delineate an exception to the definitions previously presented
- (E) describe the inadequacy of the definitions previously presented

94. The author cites *A Streetcar Named Desire* in order to

- (A) provide a counterpoint to the thesis of the passage
- (B) illustrate an aspect of the subject under discussion
- (C) advocate politicizing a work of art
- (D) illustrate the universality of politics
- (E) illustrate a fallacy of a definition

95. All of the following provide examples of the hegemonic model of domination EXCEPT:

- (A) a penitentiary sentence for assault
- (B) a summary execution for treason
- (C) a large fine for insider trading
- (D) censorship of an art exhibit
- (E) a successful military coup

96. According to a theory presented in the passage, a person is engaging in public interest conversation if that person discusses which of the following?

- (A) justice
- (B) theater
- (C) sexism
- (D) economics
- (E) politicians

97. Select a sentence from the first or second paragraph that levels an explicit criticism.

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**Questions 98–99 are based on the following reading passage.**

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*Explanationism* is the idea that prediction is, in itself, insufficient to confirm a theory. To adequately confirm a theory, according to an explanationist, is to see how well it describes events and phenomena that have already been observed. Stephen B. Rush, a staunch explanationist, would say that a correct prediction does not necessarily confirm the truth of a theory; it could be the case that a theory predicts something and yet does not provide the best explanation of it. Take, for example, the difference in the perspectives of Copernicus and Brahe on the solar system.

5 Copernicus's model of the solar system was heliocentric, positing that all of the planets revolve around the sun. Brahe's theory stated that all of the planets revolved around the sun, *except* the earth, which was

im m obile, and that the sun actually revolved around the earth. Even if both accurately predicted future m ovements of the planets, it is easy to see how C opernicus's theory has less of an 'ad hoc' quality— and, of course, provides a superior explanation of the 10 m echanism s of the solar system . It is certainly true that a theory can successfully predict a certain event, yet fail to provide an adequate explanation for w hy it happened, or perhaps even stum ble on the prediction m ore by accident than by m anner of 15 understanding the m echanism behind the event.

A predictionist w ould argue that w hile a theory can provide a perfect explanation for som ething happening, a theory cannot be tested for understanding or explaining the underlying m echanism of a phenom enon unless it can also predict som e event that confirm s that exact m echanism at w ork. For instance, a physicist m ight study the form ation of solids and posit that all solids w ill sink if they are placed in a liquid of the sam e elem ent, because the solid is denser than 20 the liquid. G iven this prem ise, w e discover that the physicist's prediction is true, and even once he stages an experim ent w ith ice and w ater, he w ill not be proven w rong, but rather w ill have discovered a unique property of solid w ater.

98. W hich of the follow ing best expresses the m ain idea of the passage?

- (A ) Explanationism is a superior theory to predictionism .
- (B ) Tw o very different ideas can both be used to successfully investigate scientific theories.
- (C ) C opernicus's m odel of the solar system w as m ore accurate than B rahe's due to explanationism .
- (D ) O ne cannot posit a physical theory w ithout predictive pow er or previous observations.
- (E ) A predictionist and an explanationist w ill alw ays diverge on w hether a scientific theory is correct.

99. W hich of the follow ing m ost accurately states the author's reason for citing the C opernicus and B rahe m odels of the solar system ?

- (A ) It show s that a theory w ithout predictive pow er can never be tested and verified.
- (B ) It reveals that som e theories can have m ore or less of an 'ad hoc' quality.
- (C ) It show s that tw o different theories can never yield the sam e predictions for future events.
- (D ) It is used to support the idea that a m ore com plicated m odel w ill alw ays fail to a sim pler m odel.
- (E ) It provides an exam ple of w hen a theory can correctly predict future events but not offer the best explanation.

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**Q uestions 100–105 are based on the follow ing reading passage.**

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Subatom ic particles can be divided into tw o classes: ferm ions and bosons, term s coined by physicist Paul D irac in honor of his peers Enrico Ferm i and Satyendra B ose. Ferm ions, w hich include electrons, protons, and neutrons, obey the Pauli exclusion principle, according to w hich no tw o particles can inhabit the sam e fundam ental state. For exam ple, electrons cannot circle the nuclei of atom s in precisely the sam e orbits, loosely speaking, and thus m ust occupy m ore and m ore

5 distant locations, like a crow d filling seats in a stadium . The constituents of ordinary m atter are ferm ions; indeed, the fact that ferm ions are in som e sense m utually exclusive is the m ost salient reason w hy tw o things com posed of ordinary m atter cannot be in the sam e place at the sam e tim e.

C onversely, bosons, w hich include photons (particles of light) and the hitherto elusive H iggs boson, do not obey the Pauli principle and in fact tend to bunch together in exactly the sam e fundam ental state, as in

10 lasers, in w hich each photon proceeds in perfect lockstep w ith all the others. Interestingly, the seem ingly stark division betw een ferm ionic and bosonic behavior can be bridged. A ll particles possess "spin," a characteristic

vaguely analogous to that

of a spinning ball; boson spins are measured in integers, such as 0 and 1, while fermion spins are always half-integral, such as  $\frac{1}{2}$  and  $1\frac{1}{2}$ . As a result, whenever an even number of fermions group together, that group of

15 fermions, with its whole-number total spin, effectively becomes a giant boson. Within certain metals chilled to near absolute zero, for instance, so-called Cooper pairs of electrons form; these pairs flow in precise harmony and with zero resistance

through the metal, which is thus said to have achieved a superconductive condition. Similarly, helium-4 atoms (composed of 2 electrons, 2 protons, and 2 neutrons) can collectively display boson-like activity when cooled to a superfluid state. A swirl in a cup of superfluid helium will, amazingly, never dissipate.

The observation that even-numbered groups of fermions can behave like bosons raises the corollary question of whether groups of bosons can ever exhibit fermionic characteristics. Some scientists

25 argue for the existence of skyrmions (after the theorist Tony Skyrme who first described the behavior of these hypothetical fermion-like groups of bosons) in superconductors and other condensed-matter environments, where twists in the structure of the medium might permit skyrmions to form.

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Consider each of the answer choices separately and indicate all that apply.

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100. The example of “a crowd filling seats in a stadium” (line 6) is intended to

- ☐ expand upon one consequence of the Pauli exclusion principle
- ☐ illustrate a behavior of certain fermions
- ☐ describe how electrons circle the nuclei of atoms in concentric, evenly-spaced orbits

101. The author’s primary purpose in writing this passage is to

- (A) explain the mechanism by which fermions can become bosons
- (B) describe the two classes of subatomic particles
- (C) provide examples of the different forms of matter
- (D) explain the concept of particle “spin”
- (E) argue that most matter is composed of one type of particle

102. Which of the following is NOT mentioned as a characteristic of bosons?

- (A) They can be composed of groups of fermions.
- (B) They are measured in integer spin.
- (C) They are the constituents of ordinary matter.
- (D) They tend to bunch together in the same fundamental state.
- (E) They lead to phenomena such as superconductors and superfluids.

103. Which of the following can be properly inferred from the passage?

- (A) An atom composed of two protons and a neutron would be considered a boson.
- (B) Skyrmions have been discovered in superconductors and other condensed matter environments.
- (C) Two electrons in an atom cannot circle the same nucleus at exactly the same distance.
- (D) A current through a superconducting wire will never dissipate.
- (E) Fermions cannot behave as bosons unless they are cooled to a temperature near absolute zero.

104. According to the passage, which of the following describes a difference between fermions and bosons?

- (A) Fermions cannot inhabit the same fundamental state, whereas bosons bunch together in the same

state.

(B ) Ferm ions contain many more types of particles than

bosons. (C ) Ferm ions exist in groups, but bosons do not.

(D ) Ferm ions have integral spin values, whereas Bosons have half-integer spin.

(E) Ferm ions do not obey the Pauli principle, whereas bosons do.

105. Based on the information in the passage about the Pauli exclusion principle, to which one of the following situations would this principle be most relevant?

(A ) Fermi Energy: The maximum energy that electrons in a solid will contain in order to avoid having identical energy levels.

(B ) Particle Accelerators: Devices that will accelerate charged particles to very high speeds through the application of an external magnetic field.

(C ) Quantum Entanglement: When particles interact physically and then become separated but still have interdependent properties.

(D ) Double Slit Experiment: An experiment that revealed the particle and wave duality of photons.

(E) The Higgs Field: The field produced by the conjectured Higgs particle that would explain why matter has mass.

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**Questions 106–108 are based on the following reading passage.**

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*Homoeconomicus*, or economic human, denotes the idea of human beings as rational, narrowly self-interested agents who, given total information about opportunities and possible constraints, seek to obtain the highest possible well-being for themselves at the least possible cost. In the late 19th century, a host of economists built mathematical models based on

5 conceiving of real humans as *Homoeconomicus*.

Exponents of *Homoeconomicus* tend to acknowledge that total information is not possible in the real world; thus, breakdown in models based on the concept are due to imperfect information held by the self-interested economic actors. Amartya Sen has pointed out that *Homoeconomicus* ignores that people can and do commit to courses of action out of morality, cultural expectations, and so forth. Veblen and Keynes allege that *Homoeconomicus* assumes far too great an understanding of macroeconomics on the part of humans. Tversky put forth that investors are not

10 rational: they are unconcerned by small chances of large losses, but quite risk-averse regarding small losses. Bruno Frey points out that humans are often intrinsically motivated, and that such motivation explains heroism, craftsmanship, and other

15 drives that do not fit neatly into the model of a narrowly focused gain-seeker. Critics of the psychoanalytic tradition point out, somewhat obviously, that humans are frequently conflicted, lazy, and inconsistent.

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Consider each of the answer choices separately and indicate all that apply.

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106. Which of the following phenomena would exemplify Bruno Frey's critique of *Homoeconomicus*?

☐ A woodworker spends months on the delicate inlay of a door, knowing that his many hours of hard work will inevitably result in a higher price when he comes to sell the piece.

☐ A television journalist often travels to dangerous countries all over the world because he is contractually obligated to do so, and his ratings are higher the more dangerous his exploits appear to

be.

- ☐ An economist dedicates her career to illustrating a fundamental flaw in a particular theory, though she knows there will be no tangible reward for her efforts.

107. Which of the following best describes the main idea of the passage?

- (A) *Homo economicus* is a useful, if theoretical, actor to use in the formation of mathematical models. (B) *Homo economicus* is a fundamentally flawed and thus theoretically useless construction, for a host of reasons.
- (C) *Homo economicus* is often criticized by those who don't fully understand its function in economic theory.
- (D) *Homo economicus* is a problematic construction, because it simplifies human motivations and is overly optimistic about human understanding.
- (E) *Homo economicus* fell out of favor with most economists in the 20th century due to its many incorrect assumptions about humanity.

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Consider each of the answer choices separately and indicate all that apply.

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108. Which of the following is a complaint leveled against the theory of *Homo economicus* posited by certain economists in the late 19th century?

- ☐ It assumes that the average person knows a lot more about the general workings of the economy than he or she actually does.
- ☐ It assumes that humans experience a proportional and linear emotional response to all risks and rewards.
- ☐ It assumes that the primary impetus behind human decision-making is not predicated on ethics or cultural mores.

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Questions 109–110 are based on the following reading passage.

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While critics contend that the views expounded on in *Against Method* are tantamount to scientific anarchism, its author Paul Feyerabend maintains that his views stem not from a desire to promote scientific chaos so much as from a recognition that many of the fundamental tenets of science—rationality, empiricism, and objectivity, for example—are as seriously flawed as the “subjective” paths to truth that scientists are quick to **repudiate**. Feyerabend goes further by arguing that

5 many methods that are now condemned in the scientific community played a critical role in historical moments of scientific progress. The fact that these methods helped science advance in the past indicates that scientists should think twice before they condemn them.

Much of *Against Method* is a case study of the events surrounding Galileo's single-handed rejection of the geocentric cosmological model in favor of the updated heliocentric model. Feyerabend goes to lengths to

10 point out that what ultimately allowed Galileo to succeed in convincing the Western world that the earth revolved around the sun (and not the other way around) was the use of methods most modern scientists would deem highly suspect. For

example, in attempting to explain why the rotation of the earth did not cause a rock dropped from a tower to follow a curved, rather than a straight, path, Galileo relied on several as-yet unproven hypotheses about the

15 laws of motion, essentially begging the question for his own position. Additionally, his published works

display a rhetorical style that reads more like propaganda than like scholarly work. By showing that these methods were critical to a crucial

scientific advancement, Feyerabend casts doubt on whether these “unscientific” practices really deserve the criticism they so often garner.

109. Replacement of the word *repudiate* in line 5 of the passage with which of the following words would result in the LEAST change in meaning in the passage?

- (A) overrule
- (B) embrace
- (C) underscore
- (D) decry
- (E) debate

110. The passage implies that Feyerabend makes use of a “case study” (line 10) primarily in order to:

- (A) demonstrate that since a canonical example of scientific progress itself made use of practices now deemed unscientific, scientists ought to revise their account of what is and is not acceptable scientific practice
- (B) show that Galileo, in his attempt to prove that a rock dropped from a tower followed a straight, not a curved path, was guilty of many of the same errors in reasoning that make science controversial today
- (C) underscore the notion that if science wants to keep thinking of itself as a field that is open to “subjective,” as well as “objective,” paths to truth, it needs to adopt some of the techniques that were prevalent in Galileo’s time
- (D) back up the claim that tautological reasoning is acceptable only when used in the service of supporting hypotheses that have yet to be proven
- (E) demonstrate that any endeavor in the philosophy of science that uses examples from history to support its claims is ultimately doomed to failure

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**Questions 111–115 are based on the following reading passage.**

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In traditional theater forms, the roles of performer and audience are completely separate, so that performance space can be said to encompass an actors’ sphere and a spectators’ sphere. Even when performers move out into the audience or when there is scripted audience interaction, spectators do not become performers. Finally, while stories may open up the imagination or excite audiences, according to Augusto Boal, they discourage political action by providing

5 catharsis. The passive spectator follows the play’s emotional arc and, once the action concludes, finds the issue closed. Boal reminds us that our theater etiquette creates a kind of culture of apathy where individuals do not act communally, despite shared space, and remain distanced from art.

Workshop theater, such as Boal’s Image Theatre and Forum Theatre, is a response to that. In the workshop form, performance space is created for a select group of people, but the performers’ sphere and the audience’s sphere are collapsed: everyone is at once theater maker and witness. In Image Theatre, participants will come up with a theme or issue and arrange themselves into a tableau that depicts what that issue looks like in society today, versus what the ideal situation would be. They then try to transition from the current image to the ideal image in a way that seems plausible to all the participants. Forum Theatre, on the other hand, creates a narrative skit depicting a certain problem. After the actors have gone through the action of the play once, a facilitator, known as the joker (like the one in a pack of cards), encourages those who have watched the story to watch it again and to

stop it at any time to

take the place of the protagonist. The aim is to find a solution to the problem, realizing along the way all of the

20 obstacles involved. In Forum Theatre, just as in Image Theatre, there is not always a solution. The main goal of this form, then, is to engage in the action, to reflect, and to understand particular issues as being part of a larger picture, thus using art to re-cast what seem like private troubles in a public, political light.

The main reason Boal developed these workshop styles was to grant audiences **agency** so that they may

25 create ways to free themselves of oppression. Because he found theater audiences to be locked into a passive role—just like he found the oppressed coerced into a subservient role in relation to their oppressors—he created the “spect-actor,” or someone who simultaneously witnesses and creates theater.

111. The second paragraph of the passage serves to

- (A) elaborate on the topic of the first paragraph
- (B) provide a rationale for an artistic endeavor
- (C) discuss an artistic answer to a passive culture
- (D) explain the theater's lack of appeal
- (E) evaluate two contrasting styles of theater

112. The author uses the word *agency* to mean

- (A) profit
- (B) organization
- (C) publicity
- (D) power
- (E) hegemony

113. Which of the following would Boal consider a “spect-actor”?

- (A) a person who engages in political action
- (B) an audience member who finds catharsis in a play
- (C) any person placed in a subservient role
- (D) any actor
- (E) a participant in an Image workshop

114. According to Boal, all of the following are disadvantages of traditional theater forms EXCEPT:

- (A) Such productions prevent the actors from going into the audience.
- (B) Such productions provide catharsis.
- (C) Such productions discourage communal activity.
- (D) Such productions obstruct political change.
- (E) Such productions distance the audience from the art.

115. All of the following would be characteristic of a Forum workshop EXCEPT:

- (A) Productions begin with a narrative script.
- (B) Different people often play the protagonist.
- (C) Some performances do not achieve catharsis.
- (D) Participants arrange themselves into a tableau.
- (E) Performances are guided by a mediator.

Stars create energy through the process of fusion. When a star explodes—a phenomenon called a supernova—so much energy is released that heavy metals such as iron and gold are formed, seeding surrounding hydrogen clouds. Newer stars therefore contain more heavy elements in their atmospheres. Heavy elements form the materials that make up our planet

- 5 (and even human bodies). It is believed that for a system of planets such as our solar system to form around a star during cloud contraction, the presence of these heavy elements in the cloud is a necessity.

A molecular cloud can become unstable and collapse by the force of gravity, overcoming outward thermal pressure of the constituent gases. At a given temperature and density, two critical measures of size, Jeans mass and Jeans length, can be calculated. If the size of the cloud exceeds either of these critical values, gravity will ultimately win, and the probability of eventual cloud contraction is high.

- 10 However, some outside influence is still evidently required for a theoretically unstable cloud to initiate collapse. The natural rotation of a galaxy can slowly alter the structure of a cloud, for instance. Surrounding supernovae can generate shockwaves powerful enough to affect the debris in other clouds, forcing the debris inward and possibly causing contraction to begin. One theory states that density waves propagating through spiral structures can also sufficiently stimulate clouds to cause contraction.

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Consider each of the answer choices separately and indicate all that apply.

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116. The author of the passage suggests that cloud contraction may begin in which of the following ways?

- ☐ through the process of fusion
- ☐ explosions of stars within a close enough proximity generate shockwaves that prompt contraction in nearby clouds
- ☐ debris within a cloud is forced outward

117. Which of the following inferences about our solar system is best supported by the passage?

- (A) Life in the solar system depends on energy from the sun.
- (B) When the system reaches a particular size, it can become unstable and begin to collapse.
- (C) The natural rotation of the galaxy can alter the galaxy's structure.
- (D) It is believed to have been formed from materials "seeded" into hydrogen clouds.
- (E) It produced so much energy when it was formed that heavy elements were generated.

118. It can be inferred from the passage that which of the following inhibits interstellar cloud collapse?

- (A) supernova explosions
- (B) galactic rotation
- (C) thermal pressure
- (D) gravitational force
- (E) density waves

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**Question 119 is based on the following reading passage.**

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The Norton-Polk-Mathis House in San Antonio displays a well-integrated design well suited for the primary purpose of the building: to impress. This is evidenced by the fact that the building was designed with



the street it faces in mind. Only the South façade is architecturally interesting or involved—the sides of the building are flat, featureless, and uninteresting. The house was designed not only as a living area, but also as a structure to be seen from the street and admired. This intent is expressed through the use of typical Renaissance ideals of order and weight, and, while it is asymmetrical, the building is well balanced and stable. The choice of materials also reflects the “re-discovery” of antiquity prevalent in the Italian Renaissance. The white stone lends an elegant simplicity to the building yet it radiates an air of strength and mass reminiscent of the Parthenon or the Athenian temples—especially when juxtaposed with the other, seemingly fragile brick and wood homes of the neighborhood.

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Consider each of the answer choices separately and indicate all that apply.

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119. Which of the following can be inferred about the Norton-Polk-Mathis House?

- ☐ It was built during the Italian Renaissance.
- ☐ Its primary purpose was utilitarian in nature.
- ☐ It appears stronger than other nearby homes.

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**Questions 120–121 are based on the following reading passage.**

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After 22 years of observations in Shark Bay, Australia, behavioral biologist Janet Mann and her colleagues have discovered that certain bottlenose dolphins, known as spongers, form social networks, showing the first hints of culture among non-human animals. Spongers are dolphins that wear marine basket sponges on their beaks as hunting tools, using them to root around on deep sandy bottoms and find fish concealed below the sand. Sponging is a complex hunting technique passed on from mother to offspring. A sponger must know where the sponges grow, how to pick the right sponge, how to remove the sponge intact from the ocean floor, and how and where to properly hunt.

Spongers typically live solitary lives, but over 22 years of observation, a pattern emerged. The 28 female spongers formed cliques with other female spongers that were not necessarily genetically related to them. This behavior differs from other animal behavior where circumstances, such as genetics or food sources, dictate the formation of groups. The fact that these spongers chose to associate based upon similar, socially learned behaviors makes their cliques a cultural first among animals.

120. Which of the following expresses the main idea of the passage?

- (A) Sponging is a complex behavior used by some dolphins as a hunting technique.
- (B) Any study of animal behavior must take place over an extended period of time in order for patterns to emerge.
- (C) A small set of non-human animals has been found to form social networks.
- (D) Studying how animals form groups is important to our understanding of nature.
- (E) Only humans can form social networks.

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Consider each of the answer choices separately and indicate all that apply.

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121. Which of the following can be properly inferred from the passage?

- ☐ Groups formed by genetic bonds or food supplies do not qualify as social networks.
- ☐ All spongers of Shark Bay, Australia form social networks.
- ☐ Spongers can only be found in Shark Bay, Australia.

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Questions 122–123 are based on the following reading passage.

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For years, the idea that blind people can hear better than sighted people was considered something of an old canard. However, functional brain imaging now has allowed us to look inside the brains of blind people who possess what can only be termed cerebral superpowers—the ability to understand speech at up to 25 syllables per second, a speed that sounds like “noise” to sighted people (a typical sighted person understands closer to 10 syllables per second). As it turns out, a brain region called V1, situated at the back of the skull and which normally only responds to light has actually been rewired in the brains of blind people—and now processes auditory information. This is truly a stunning example of the brain’s plasticity, a topic of cardinal importance in designing educational experiences and materials to best engage the brains of students.

Of course, in discussing the brain’s amazing plasticity, modern thinkers take for granted something that would have been shocking to thinkers from Aristotle (who posited a holistic, non-corporeal mind in *De Anima* in the 4th century, B.C.) through Descartes (who argued, in the 17th century, for mind-body dualism)—the idea that the mind is physically located in the brain and that our intellect, personality, and selfhood are attributable to physical processes in the brain and can be altered by brain injuries.

122. According to the passage, the belief that blind people can hear better than sighted people

- (A) is untrue
- (B) was not a matter of contention, but was then shown to be true
- (C) was, for years, thought to be true, but is now up for debate
- (D) is put forth by the scientific community, but this evidence is contested by many
- (E) was, for years, commonly known but thought by many to be false, and then was shown to be true

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Consider each of the answer choices separately and indicate all that apply.

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123. According to the passage, Aristotle would NOT have thought that

- ☐ the mind is separate from the body
- ☐ the mind exists in parts or modules, rather than as one entity
- ☐ blind people can hear better than sighted people

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Questions 124–125 are based on the following reading passage.

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The atrocities committed during the Second World War by the National Socialists are well known and have been meticulously documented by historians. Far less known, however, are the mass deportations that took place almost two years after the conclusion of the war, this time orchestrated by the Allied governments. In the years after 1945, over 12 million German-speaking citizens of Czechoslovakia, Hungary, Romania, and Poland were dispossessed, packed into trains, and left to fend for themselves in newly defeated and impoverished Germany. What allowed for this mass exile—the largest forced migration in history—was the confluence of political motivations on the part of the key players. The expelling countries of Eastern and Central Europe were especially keen on punishing Germans for the horrors of the war—though, of course, their own German-speaking populations were hardly responsible for Germany's actions—and on increasing the ethnic homogeneity within their borders. The Allied powers, too, had something to gain. The Soviet Union, intent on capitalizing politically on Germany's defeat, aimed to irrevocably undermine relations between Germany and Poland, especially by ceding German territory to Poland and emptying it of its inhabitants. Britain, weary from the war, hoped the resulting mass suffering would reinforce the completeness of Germany's defeat. And the United States, in turn, was attempting to cozy up to the nations of Eastern and Central Europe in the hopes of keeping them away from Soviet influence.

The result of the deportations, however, was the death of at least 500,000 people and Germany's acquisition of a homeless population far greater than that of any other industrialized country. The death toll was not far worse, furthermore, only because the Soviets' ambition to cripple Germany was unsuccessful. Following the war, Germany underwent what is known as its "economic miracle," which made it possible to house, feed, and employ the mass of exiles. That this episode is practically excised from the history books in some countries, however, is surely corroboration of the platitude that history is written by the victors.

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Consider each of the answer choices separately and indicate all that apply.

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124. Which of the following can be inferred from the passage?

- ☐ Some events that occurred during World War II do not appear in history books.
- ☐ The Allied powers included the Soviet Union, Britain, the United States, and Poland.
- ☐ The Allied powers were not entirely unified on political matters.

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Consider each of the answer choices separately and indicate all that apply.

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125. Which of the following, if true, would weaken the claim that the Allied powers had something to gain from the deportations?

- ☐ The United States believed that the Eastern and Central European powers hoped to create more multicultural, ethnically mixed societies.
- ☐ The Soviet Union wanted to profit from post-war trade between Germany and Poland.
- ☐ Britain, weary of the killing during the war, pledged itself to preventing suffering.

Quantum mechanics is a relatively new field of physics that was developed in the early 1900's. Although we classically think of a particle as a fixed object, quantum mechanics describes particles as waves using properties such as position and energy. The quantum mechanical wave describes the probability of a particle to attain certain values of these properties, and measuring the particle samples from this probability. Take, for example, the analogy of rolling a six-sided die. For each roll there is a one-in-six chance that any single number will result. After rolling, however, only one single number will be observed. If the die is rolled enough times, one can deduce that the die has six sides and that each side is equally likely. However, one can never be completely sure, because rolling dice is probabilistic in nature. Quantum mechanics states that the same is true of the position (and other properties) of a particle. A particle trapped in a closed box has some finite probability of being at any location within the box. Open the box once and you'll find the particle at only one location. Open the box enough times and you'll see all the particle locations and the frequency at which they are achieved. From this, one can deduce the original properties of the quantum mechanical wave, just as one could deduce the properties of the die.

The counterintuitive properties of quantum mechanics, that the attributes of a particle cannot be known in advance of measurement, initially provoked many strong philosophical debates and interpretations regarding the field. In fact, Einstein was deeply troubled by the idea of nature being probabilistic and commented famously that, "God does not play dice with the universe." Over the last 70 years, however, irrefutable evidence has abounded that verifies the truth of the theory of quantum mechanics.

126. Which of the following best expresses the main idea of the passage?

- (A) Particles are not a fixed object but rather waves.
- (B) Controversial theories are often found to be correct.
- (C) Quantum mechanics correctly postulates the probabilistic nature of particles. (D) Many questions still exist about the nature of particles and quantum mechanics.
- (E) Experiments can be designed to test the quantum mechanical nature of particles.

127. Based on the information in the passage, which of the following would best explain Einstein's motivation for stating that "God does not play dice with the universe"?

- (A) Einstein did not believe that particles should be governed by probability as in a game of dice. (B) Einstein believed that God should control the fate of the universe.
- (C) Einstein was opposed to the theory of quantum mechanics on the grounds that it violated causality. (D) Einstein's religious beliefs did not allow him to fully understand the theory of quantum mechanics.
- (E) Einstein believed that God created the universe such that particles would be modeled probabilistically as in quantum mechanics.

Consider each of the answer choices separately and indicate all that apply.

128. Which of the following can be properly inferred based on the information in the passage?

- ☐ The location of a particle within a closed box cannot be known for certain without observing the

particle.

- ☐ Properties such as position and energy of a particle can never be measured.
- ☐ Particles can be properly described as quantum mechanical waves.

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**Questions 129–133 are based on the following reading passage.**

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Invisible theater and guerrilla theater are two forms of street theater with similar origins but very different approaches. Both forms take place exclusively in public places, but invisible theater conceals its performative nature whereas guerrilla theater flaunts it. While invisible theater creates a performance space unbeknownst to its audience, guerrilla theater actively seeks the attention of an audience by explicitly imposing a performance space onto a public place.

Starting in the early 1970's, Augusto Boal and fellow actors have staged scenes regarding social issues in public or semi-public places (e.g., restaurants), crafting their dialog and action to get a verbal reaction from bystanders. Because performers and non-performers remain distinct, invisible theater returns somewhat to the model set up by traditional theater. However, there are a few key differences. The performance space is created in public places without the awareness of non-performers. For non-performers, being beyond the performative space allows them to avoid the etiquette of theatergoing and removes that "lens" that unavoidably emerges when we feel we are viewing art or performance. If people do not suspect that they

are viewing art, however, they are free to engage with the action and concepts of an unfolding drama as if these actions and concepts were real.

Boal has documented various successful instances of invisible theater in which non-performers actively listen, participate in public-spirited discussion, and even take unplanned public-minded action in response to the dialogue and events set up by invisible theater performers. Because onlookers think they are witnessing real life events, because the performers are bold in their statements, because the scripted characters are very vocal about what they are doing and experiencing, invisible theater is able to instigate political conversation within an everyday context; it successfully creates public forums out of thin air.

Guerrilla theater creates surprise performances in public, but is driven by the forceful imposition of "traditional" (if we can call anything about guerrilla theater "traditional") theater. One example includes two professors of Glaway's University College who dressed in their robes and went out to the street, questioning pedestrians and awarding diplomas to the ones least able to provide good answers, as a way to protest their university's decision to grant Ronald Reagan an honorary doctorate in law.

A large part of the goal of guerrilla theater is to get publicized, its message echoed over and over in our ever-expanding network of technology-interface mass media. Guerrilla theater knows it may antagonize its direct audience—it often hopes to, because conflict is more likely to be broadcast, and the goal of guerrilla theater is to get people talking publicly.

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**Consider each of the answer choices separately and indicate all that apply.**

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**129. Which of the following can be inferred from the passage?**

- ☐ When people are unaware that they are viewing a performance, they tend to act more naturally.
- ☐ Invisible theater is best described as improvisational.
- ☐ One measure of the success of a theatrical performance can be the actions taken by the audience once

the performance is over.

130. The main point of the passage could best be described as

- (A) a discussion of two different but aligned artistic currents
- (B) an examination of which of two art forms is more effective at prompting political action
- (C) a synopsis of the evolution of theater
- (D) a presentation of two theatrical concepts that conceal their performative nature
- (E) an overview of artistic life in public places

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Consider each of the answer choices separately and indicate all that apply.

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131. Which of the following is true of both invisible theater and guerrilla theater?

- ☐ both have a goal of encouraging discourse
- ☐ both impose performance space onto public location
- ☐ both antagonize their audience

132. The passage implies that the Gateway professors believed which of the following?

- (A) Guerrilla theater was superior to invisible theater.
- (B) Protesting an honor could result in the revocation of the award.
- (C) Granting Ronald Reagan a degree demeaned the intellectual standard of the university.
- (D) Handing out diplomas was a legal activity.
- (E) Ronald Reagan's foreign policy had deleterious effects.

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Consider each of the answer choices separately and indicate all that apply.

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133. Which of the following, if true, would undermine the principle of invisible theater?

- ☐ When people knowingly view art, their heightened attention increases their perception and involvement.
- ☐ Audience members watch a performance and later report to others what happened, still not knowing that the event was a theater piece.
- ☐ A lively debate about public issues is brought to a halt by the imposition of scripted characters inserting theatrical dialogue.

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**Questions 134–138 are based on the following reading passage.**

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Cells employ many strategies to avoid genetic mutation. From the high fidelity of DNA-synthesizing enzymes to the pro-death signaling that accompanies mutagenic stimuli such as UV radiation, cellular mechanisms that stymie genetic changes are ubiquitous throughout the natural world. These mechanisms are critical because widespread genomic changes would

5 wreak physiological havoc; indeed, malfunction in molecular players that safeguard against mutagenesis, such as the protein p53, have been implicated in diseases such as cancer.

Yet despite the criticality of preventing and eliminating DNA mutations to avoid deleterious changes in cells, in specific contexts many organisms have also adapted beneficial mechanisms to induce genetic changes.

One such instance is observed in vertebrate immune systems: white blood cells such as T cells recognize invading pathogens through receptors on their surfaces. In order to recognize a wide variety of pathogens, these cells must generate a large repertoire of receptors. Relying only on a genetically encoded repertoire would be disadvantageously limiting— analogous to having only a few dozen language phrases with which to respond to the nearly infinite potential combinations of words in a conversation. Instead, the repertoire is generated by a process of genetic recombination, in which T cells “cut-and-paste” the DNA encoding their microbe-recognizing receptors. Many of these genetic rearrangements produce cells bearing non-functional proteins; such unproductive cells are eliminated through senescence. Nevertheless, this seemingly haphazard process of programmed genetic mutation is crucial to generating immunological diversity, as individuals with defects in this pathway exhibit clinical immunodeficiency. How this process is regulated by T cells to prevent harmful mutations remains the subject of ongoing research.

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Consider each of the answer choices separately and indicate all that apply.

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134. Which of the following is true of genetic changes in cells?

- ☐ They can cause serious problems to body systems.
- ☐ They can provide benefits to the immune system.
- ☐ Some genetic mutation is regulated by T cells.

135. The phrase “seemingly haphazard” (line 19) is meant to indicate that:

- (A) the process of programmed genetic mutation deserves further study.
- (B) the production by T-cells of “unproductive cells” is wasteful.
- (C) genetic recombination may appear random, but is not.
- (D) T-cells are essential to proper immune system functioning.
- (E) programmed genetic mutation can be dangerous to an organism.

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Consider each of the answer choices separately and indicate all that apply.

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136. Which of the following can be inferred from the first paragraph of the passage?

- ☐ Pro-death signaling is a mechanism that hinders genetic changes.
- ☐ Cellular mechanisms that safeguard against mutagenesis are very common.
- ☐ Protein p53 may play a role in preventing cancer from forming.

137. The analogy (lines 14–15) regarding “a few dozen language phrases ... conversation” is meant to elucidate

- (A) why genetic recombination is important to T cell functioning
- (B) the need for numerous means of fighting cancer and other diseases caused by cell mutation
- (C) why white blood cells such as T cells rely on a genetically encoded repertoire
- (D) how language use is like “cutting and pasting”

(E) the mechanism by which mutagenesis can compromise physiological functioning

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Consider each of the answer choices separately and indicate all that apply.

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138. In the analogy in the third paragraph, the “nearly infinite potential combinations of words in a conversation,” represent

- ☐ pathogens
- ☐ receptors
- ☐ T cells

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Questions 139–140 are based on the following reading passage.

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Martin Haberman pulls no punches in his scathing critique of the insensitive and unjust treatment received by children in poverty in the public school system. He focuses the brunt of his criticism on teachers who have been insufficiently trained for the realities of the modern school environment and whose prejudices, lack of deep content knowledge, and excessive focus on order and discipline profoundly limit their effectiveness. Haberman writes, “the principles and theories we call child and adolescent development were all developed to explain the middle-class experience,”

- 5 and that everyone else in public schools, including non-white, immigrant, or non-English-speaking children, are considered somehow anomalies, thus leading to the absurd situation in which a teacher completes teacher training and is put in front
- 10 of a class of students she considers to be made entirely of “exceptions.”

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Consider each of the answer choices separately and indicate all that apply.

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139. According to Haberman, a teacher’s effectiveness can be compromised by

- ☐ insufficient attention to order and discipline
- ☐ insufficient knowledge of the material being taught
- ☐ personal bias

140. In the last line of the passage, the word *exceptions* is in quotes to make the point that

- (A) the idea of “exceptions” is crucial to effective education
- (B) the quote is taken verbatim from a teacher
- (C) students who perform academically well are an aberration, not the reverse
- (D) certain teachers inappropriately consider “non-white, immigrant, or non-English-speaking children” as other than the norm
- (E) teachers versed in the principles and theories of child and adolescent development developed to explain the middle-class experience are actually the norm

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Questions 141–142 are based on the following reading passage.

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Naturalism, arising in the 19th century as a literary response to Darwin's account of evolution, focused on describing everyday reality but differed from realism in its attempts to provide a "scientific" foundation for its depictions of characters, stressing the influence of environment and heredity upon the individual psyche. Émile Zola, in particular, saw his craft as an extension of the scientific method into the domain of art. The 19th century, perhaps in opposition to naturalism, saw the rise of the Decadent movement, embracing artifice over nature in their writing,

- 5 championed by Zola's erstwhile protégé, Joris-Karl Huysmans. The protagonist of his masterpiece, *À rebours* (literally, *Against the Grain*, but more commonly translated as *Against Nature*), removes himself from society—viewing it as the product of
- 10 a nature long surpassed by human ingenuity—and surrounds himself exclusively with art, perfume, literature, and technology.

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Consider each of the answer choices separately and indicate all that apply.

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141. Which of the following can be inferred from the passage about perfume?

- ☐ Some followers of the Decadent movement considered it to be an example of human artifice.
- ☐ Some followers of the Decadent movement considered it to be superior to natural entities.
- ☐ Some followers of the Decadent movement enjoyed surrounding themselves with it.

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Consider each of the answer choices separately and indicate all that apply.

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142. Which of the following, if true, would undermine the claim that the Decadent movement was opposed to naturalism?

- ☐ Decadent authors intended to use literature as a vehicle for the scientific method.
- ☐ Decadent authors focused on the effects of environment on shaping character.
- ☐ Decadent authors elaborated on the way inherited traits influenced human behavior.

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**Questions 143–144 are based on the following reading passage.**

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For many years, biological scientists have sought to decipher cellular function by quantifying the degrees of protein and mRNA expression within populations of their cells of interest. Classically, these measurements required combining many cells into a single sample and rupturing their membranes, thus exposing pooled quantities of the target molecule for detection. One limitation of these techniques is the reliance on average measurements: it is impossible to distinguish a uniform population of cells expressing intermediate quantities of a molecule from a population

- 5 composed of separate low and high expressers. The distinction has proven to be important, particularly in the context of drug targeting of cancer cells; prescribing a dose to hit the "average" cell may completely miss the more aggressive "one
- 10 percent."

The advent of single-cell measurement technology such as flow cytometry and R N A FISH has made it possible to capture not only a population's average levels of a molecule, but also the distribution of the molecule's expression within the population. As a result, researchers are increasingly investigating the sources and significance of variability within populations that were previously assumed to be identical.

143. According to the passage, the limitation of combining many cells into one sample and then rupturing their membranes in order to detect a target molecule is that

- (A) variability exists within cell populations
- (B) some cells in the sample may contaminate others
- (C) this method cannot single out the cells that express more of a certain molecule
- (D) the rupture of cell membranes is implicated in the formation of cancer
- (E) it is preferable to capture a population's average levels of a molecule

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Consider each of the answer choices separately and indicate all that apply.

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144. Which of the following can be inferred from the passage regarding flow cytometry and R N A FISH ?

- ☐ Both technologies allow researchers to quantify properties of individual cells.
- ☐ Using these technologies, it is impossible to distinguish a uniform population of cells expressing intermediate quantities of a molecule.
- ☐ Both technologies allow researchers to measure variability of molecule expression within cell populations.

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**Questions 145–146 are based on the following reading passage.**

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The Portuguese began to enter Angola in the 16th century, and over the next three hundred years slowly pushed into the interior of the sizable nation of Southern Africa, finally achieving complete occupation by the 1920's. However, following Angolan independence in 1975, and despite a bloody civil war that lasted until 2002, the Angolan economy has grown at a double-digit pace since the 1990's, due largely to expansive mineral and petroleum reserves. Conversely,

5 Portugal is now broke and in debt, its economy shrinking by full percentage points every year. In a grand stroke of irony, Portugal's Prime Minister Pedro Passos Coelho in 2011 suggested to Angola's President Jose Eduardo dos Santos that "We should take advantage of this moment ... to strengthen our bilateral relations." President dos Santos replied, "We are aware of Portugal's difficulties and we are open and available to help." This "help" will likely come in

10 the form of Angola's investment in Portuguese industries that the International Monetary Fund has ordered be privatized as a condition of a 78 billion dollar bailout. Already, the country that once mined Angola for slaves and raw material is now virtually helpless as Angola purchases Lisbon's prime real estate, using much of it to build luxury resorts where

15 Angolan officials go for holidays.

Despite the stunning reversal of fortune, Angola is not without its difficulties. Corruption is rampant, and Angola has one of the highest levels of income inequality in the world—in the capital city of Luanda, hamburgers go for 50 dollars and designer jeans cost twice what they do in London or New York, while two-thirds of the population lives on less than 2 dollars a day.

145. Which of the following is NOT stated as a component of Portugal and Angola's historical relationship?
- (A) Portuguese traders sold Angolan slaves.
  - (B) Raw material was taken from Angola by the Portuguese.
  - (C) The two nations were at war.
  - (D) The Portuguese increasingly dominated Angola over a period of several hundred years.
  - (E) Angola achieved independence from Portugal in the 20th century.

146. The “grand stroke of irony” (line 7) is best described as:

- (A) two countries dedicated to strengthening bilateral relations share economic problems.
- (B) a former colonial possession is now being called upon to assist its former possessor.
- (C) slavery has ended, and yet people still live in poverty.
- (D) the cost of living in Luanda is very high, and yet most people are poor.
- (E) the Portuguese economy was once thriving and is now dwindling.

**Questions 147–149 are based on the following reading passage.**

For as long as humans have been philosophizing about the mind, virtually every thinker has conceived of the mind as a unitary entity. In fact, such a view was crucial to both Aristotle's and Descartes's view that the mind (or the soul) survived death. Surely the self cannot be subdivided; surely one cannot have half a mind?

Indeed, the final evidence that one can, in fact, have “half a mind” came in the 1960's, from the famous studies for which Roger Sperry was awarded the Nobel Prize in 1981 for his discoveries about the functional specialization of the cerebral hemispheres. Working with epileptics who had been treated via the cutting of the *corpus callosum*, or division between the two hemispheres, Sperry was able to observe “odd behavior” in these patients— each half of the brain could gain new information, but one hemisphere was entirely unaware of what the other had learned or experienced.

Restak, in *The Modular Brain*, posits that the brain is not centrally organized (some prior theories of mind had actually posed the existence of a “director” in the brain, begging the question of who directs the director's brain) but, alternately, that different parts of the brain control different abilities, and that those “modules” can operate independently. As we can easily see from patients with brain damage, there is no “unified mind and personality”— part of ourselves, centered in different parts of the brain, can change or be obliterated entirely as a result of physical changes to the brain. Consider the case of Phineas Gage, a railroad worker who, in 1848, while attempting to compress explosive powder with a tamping rod, literally blew a hole in the front of his brain. While Gage was ultimately able to function fairly normally, his personality was markedly changed; he became boorish and irresponsible. Gage's case was well documented, allowing modern reconstructions to show that his injury affected areas of the brain that we now know to be related to moral sensibilities and their expression. That is, Phineas Gage literally lost one (or more) of the modules in his modular brain system.

147. The case of Phineas Gage is presented as evidence that

- (A) the modular brain system has a central “director”
- (B) people who lose parts of the brain are usually able to function normally
- (C) brain injury is a serious risk in certain types of work

- (D ) splitting the *corpus callosum* can result in marked changes in personality  
(E) aspects of personality can be physically located within the brain

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Consider each of the answer choices separately and indicate all that apply.

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148. In lines 13–14, the phrase “begging the question of who directs the director’s brain” is meant to emphasize that

- ☐ the problem of a “director” in the brain is recursive  
☐ whether there is such a “director” of the brain is an open question  
☐ Restak has both asked and answered a question about the brain’s organization

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Consider each of the answer choices separately and indicate all that apply.

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149. Which of the following can be inferred about thinkers who conceive of the mind as a unitary entity?

- ☐ They believe that the mind survives death.  
☐ Their views are incompatible with modular brain theory.  
☐ They are unaware that certain aspects of personality are known to be controlled by certain areas of the brain.

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**Questions 150–152 are based on the following reading passage.**

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Most mental health disorders and cases of drug abuse tend to diminish a person’s ability to recognize other people’s feelings. A recent study in Norway suggests, however, that these effects can be bolstered by a nasal spray puff of the brain hormone oxytocin, which is known to increase feelings of calm and social bonding. Although oxytocin is already prescribed for

5 certain disorders that affect social function, such as autism, these treatments are often tried in isolated cases, leaving the overall effects of the drug without evaluation.

The Norwegian experiment focused on 40 students, each of whom was given either a control dose of salt water or the drug oxytocin. After the nasal dose, the students were shown faces of happy, angry, or neutral expressions, some of which were subtler than others. The researchers found that after a nasal spray dose of oxytocin, the students’ awareness of the expressions was  
10 intensified. Further, the experiment showed that the oxytocin had the greatest effect on those who were least able to evaluate emotions properly when given the control.

Although the results of this study seem promising, Leknes, the lead scientist in the investigation, cautions that the hormone would not be a “cure-all” for mental illness or drug

15 addiction. Rather, he suggests, the hormone might help some individuals better interpret the social cues from the world around them.

150. Based on the information in the passage, the author of the passage would most likely agree with which of the following statements about the brain hormone oxytocin?

- (A ) Its overall effects require further evaluation.

- (B ) In the future,it w ill be used to cure m ental illness and drug addiction. (C ) It is not useful for people w ho are already able to interpret social cues. (D ) Its effects on the brain are unknow n. (E) It is m ore effective w hen dosed via nasal spray than orally.

151.The passage lends the m ost support to w hich of the follow ing conclusions about the nasal spray study of oxytocin?

- (A ) The results of the study are inconclusive because a sam ple set of 40 students is not substantial. (B ) The nasal spray of oxytocin increased feelings of calm and social bonding for the students. (C ) M any students w ere unable to recognize the expressions show n to them w hen given only the control dose of salt w ater. (D ) The students w ho m ight need oxytocin m ost are the ones w ho appear m ost responsive to the horm one. (E) The subtler the expression,the m ore difficult it w as for the students to identify.

152.W hich of the follow ing is N O T m entioned in the passage regarding the N orw egian study on oxytocin?

- (A ) The study show ed that oxytocin m ade students m ore able to distinguish faces from one another. (B ) Leknes w as the lead scientist in the investigation. (C ) A control dose of salt w ater w as used to gauge norm al student ability to recognize facial expressions. (D ) Students w ho participated in the study w ere show n happy,angry,or neutral expressions. (E) O xytocin had the greatest effect on students w ho w ere least able to evaluate em otions properly w hen given the control dose.

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**Q uestion 153 is based on the follow ing reading passage.**

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Ever-present in Jam aican folklore and storytelling is the character of the trickster A nansi,an A frican spider-god w ho regularly outsm arts other anim al-god characters.A lso know n as K w aku A nanse,'N ancy Spida,' and A unt N ancy in the Southern U S,the character of A nansi originated w ith the A shanti people in G hana.In Jam aican culture,as w ell as throughout the C aribbean,A nansi has been a sym bol of slave resistance.Just as A nansi uses cunning and subterfuge to achieve 5 victories over his oppressors,so too did slaves em ploy such strategies w ithin the pow er structure of the plantations.

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C onsider each of the answ er choices separately and indicate all that apply.

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153.W hich of the follow ing can be inferred from the passage?

- ☐ A nansi originated in Jam aican folklore.  
☐ Jam aican folklore features other characters that have both divine and anim al characteristics. ☐ A nansi is know n on at least tw o continents

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**Q uestions 154–156 are based on the follow ing reading passage.**

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The cosmic microwave background is a uniform 2.7 K elvin radiation that permeates the entire universe. Although it was postulated almost 50 years before, Penzias and Wilson discovered the cosmic microwave background accidentally in the 1970's. Working at Bell Labs, these two scientists were using a radio telescope to observe distant stars. They found, however, that no matter where they pointed their telescope they observed an approximately 3 K elvin background signal. After convincing themselves that this signal was real and not some artifact of their instrument, they consulted with a team at Princeton University that had been searching for the cosmic microwave background. The Princeton team confirmed what Penzias and Wilson had found. Apparently, Penzias and Wilson had accidentally stumbled upon the oldest observable in the entire universe.

Why does the cosmic microwave background exist and permeate all of space? Just an instant after the Big Bang, all matter in the universe was so energetic, or hot, that it existed as free particles known as "quarks." In the fractions of a second following, the universe expanded and cooled until the quarks lost enough energy to form electrons, protons, and neutrons, the building blocks of ordinary matter. Photons, the smallest particles of light, also filled the universe and were so energetic that they "bounced" off electrons, keeping the electrons and protons from forming atoms. After approximately 400,000 more years, the photons lost enough energy that atoms could form readily. Without any lone electrons off of which photons could "bounce," the photons began streaming unimpeded all through the universe, mostly unchanged but for one exception. Due to the further expansion and cooling of the universe, these photons have cooled to just 2.7 degrees above absolute zero. It was these same photons that Penzias and Wilson observed approximately 13.6 billion years later here on Earth.

154. Which of the following most accurately expresses the author's intent in writing the passage?

- (A) to describe the discovery and reason for the cosmic microwave background.
- (B) to explain how science discoveries can be made accidentally.
- (C) to argue that the cosmic microwave background is the oldest observable in the universe.
- (D) to defend the work of Penzias and Wilson.
- (E) to support the theory of the Big Bang using the cosmic microwave background.

155. According to the passage, which of the following events occurred first after the Big Bang?

- (A) The universe expanded and cooled until atoms formed.
- (B) Photons streamed unimpeded through space.
- (C) All matter existed as particles known as "quarks."
- (D) The cosmic microwave background cooled to 2.7 K elvin.
- (E) Atomic nuclei, composed of protons and neutrons, formed.

156. According to the passage, to which of the following would the author most likely agree regarding the discovery of Penzias and Wilson?

- (A) It was not as important as the signal for which they were originally searching.
- (B) The telescope belonging to Penzias and Wilson was more sensitive than that of the Princeton team.
- (C) Penzias and Wilson would not have discovered the cosmic microwave background if it had been more than 3 K elvin in temperature.
- (D) Penzias and Wilson did not initially understand the implications of their results.
- (E) Penzias and Wilson did not believe that their signal was real when they took their discovery to the Princeton team.

**Questions 157–158 are based on the following reading passage.**

American composer and conductor John Philip Sousa viewed the increasing popularity of the phonograph with deep dismay. He suggested that it would “reduce the expression of music to a mechanical system of megaphones, wheels, cogs, disks, cylinders, and all manner of revolving things, which are as like real art as the marble statue of Eve is like her beautiful,

- living, breathing daughters.” Such “mechanical” music was not sincere, according to Sousa: “The nightingale’s song is delightful because the nightingale herself gives it forth. The boy with a penny whistle and glass of water may give an excellent imitation, but let him persist, he is sent to bed as a nuisance.”

Sousa further decried a “decline in domestic music,” noting the decline of musical instrument purchases and predicting that when music comes so easily out of a phonograph, others will not bother to sing lullabies to their babies. He opined that when music is so readily playable, musical and vocal instruction as a normal part of education will fall out of fashion, the “tide of amateurism” receding, and music will become the province of machines and professional singers only. “What of the national throat?” asked Sousa. “Will it not weaken? What of the national chest? Will it not shrink?”

Consider each of the answer choices separately and indicate all that apply.

157. Which of the following, if they occurred, would contradict Sousa’s arguments?

- ☐ A private school that once demanded two semesters of vocal instruction as a requirement for graduation now offers the same classes as electives.
- ☐ A young boy in an isolated rural area during the Great Depression hears a professional bluegrass band for the first time on a phonograph, and it inspires him to ask his grandfather to teach him to play the family banjo.
- ☐ A modern recording artist comments that, because of her terrible stage fright, her live performances are less genuine than the recordings she is able to produce when she feels comfortable in the studio.

158. The “national chest,” as used in the passage, means:

- (A) the performances of professional singers
- (B) the U.S. Treasury
- (C) the phonograph
- (D) the vocal abilities of amateur American singers
- (E) musical instruments found in American homes

**Questions 159–160 are based on the following reading passage.**

In thermodynamics, an idealized blackbody is an object that reflects zero incident electromagnetic radiation, absorbing all such radiation instead and consequently warming up. The blackbody emits just as much energy per unit time as it absorbs; the electromagnetic spectrum of the emitted energy, however, is completely determined by the temperature of the blackbody and by no other properties thereof, such as material composition or structure. In contrast, reflected radiation undergoes no fundamental change in its original spectral characteristics, other than a

5 possible Doppler shift created by the motion of the reflector relative to an observer. Researchers have recently discovered that a microscopic “forest” of vertically aligned single-wall carbon nanotubes of varying heights applied to a surface has

10 extremely low reflectance across a wide range of wavelengths of visible light, the closest scientists have come thus far to creating a perfectly dark material.

159. Which sentence in the passage states the variables that define the electromagnetic spectrum of a blackbody?

Consider each of the answer choices separately and indicate all that apply.

160. Which of the following can be properly inferred from the passage?

- ☐ An object that reflects incident electromagnetic radiation is not an idealized blackbody.
- ☐ Reflected radiation always exactly matches the spectral characteristics of the original incident radiation.
- ☐ A microscopic “forest” of vertically aligned single-wall carbon nanotubes of varying heights applied to a surface will absorb all incident electromagnetic radiation.

Questions 161–163 are based on the following reading passage.

Universalism was most prominently set forward by the linguists Joseph Greenberg and Noam Chomsky. Chomsky, attempting to account for the celerity with which children grasp the subtle grammatical rules of their native tongues, argued that the best explanation is that the human brain has “modules” capable of generating an entire grammar on the basis of a small set of “generative rules.” We should therefore expect to find grammatical features shared by all human languages. Greenberg, on the other hand, painstakingly listed the grammatical features shared by multiple languages, positing that such commonalities must reflect innate cognitive biases. Greenberg’s data paid special attention to word order, yielding the hypothesis that some grammatical features of languages must be co-dependent. Chomsky’s view, in turn, predicts that as languages evolve and change, the grammatical features generated by the same rule should covary. A team led by Russell Gray, a New Zealand psychologist, recently released the results of a massive study that they claim casts doubt on these universalist predictions. **Borrowing** the technique of phylogenetic analysis from evolutionary biology, Gray and his colleagues reconstructed four family trees containing more than two thousand languages.

They found that the co-dependencies in word-order change varied among families, suggesting that each family has evolved its own rules. Moreover, if co-dependencies were common to two families, there was evidence that they had separate origins within each family, thus yielding no evidence of family-invariant rules. Many universalists, however, were unimpressed: that languages vary widely is well-known. But given that some language is spoken by virtually all

20 human beings, it would be strange if it did not reflect cognitive universals. It is the search for those universals, not the cataloguing of variations, that should take priority.

161. The passage most likely uses the word *borrowing* to indicate that

(A) Gray and his colleagues produced research that was not original.



- (B ) linguistics and evolutionary biology have many features in common.
- (C ) progress in linguistics cannot be carried out through the traditional methods of linguistics.
- (D ) research methods common to one branch of science can prove fruitful to another.
- (E) facts about linguistics can shed light on our understanding of evolution.

162. Select the sentence in the passage that provides support for the thesis of universalism .

163. Which of the following can be inferred from the passage?

- (A ) The thesis of universalism can only be supported through empirical studies.
- (B ) Some researchers believe that empirical research can undermine theoretical conclusions.
- (C ) Grammatical features in all languages co-vary.
- (D ) There is no evidence of the existence of family-invariant rules.
- (E) Universalism is the only way to explain the speed at which children acquire language.

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**Questions 164–166 are based on the following reading passage.**

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For many years, most physicists supported one of two cosmological theories: the steady-state universe, and the Big Bang. The theory of the steady-state universe states that the universe has always existed exactly as we observe it at present, whereas the Big Bang theory postulates that the universe was conceived from a singularity in space-time that has expanded

5 into current universe. The validity of either theory was not tested until 1929, when Edwin Hubble famously discovered what is now known as Hubble's Law .

Hubble's experiment is now a famous benchmark in modern physics. Hubble, using the Mount Wilson Observatory, observed a class of stars known as Cepheid variables, luminous stars that blink and flicker with a rate that depends on their distance from the observer.

Using this relation and years of observing, Hubble calculated the distance to many of these variable stars.

Milton Humason, a fellow astronomer, helped Hubble to calculate the stars' relative velocities to Earth. When

10 Hubble combined the two data sets he found an interesting relationship: all the stars appeared to be moving away from us! In fact, the speed at which they were moving increased with an increasing distance from Earth.

Hubble realized, from this small set of data, that the earth was a part of the expanding universe. As the universe expands outward in all directions, any observer from a fixed vantage point will look out and see

15 everything running away from them . The further away any two points are, the more the expansion affects them , and the faster they appear to be moving away from each other. Hubble's result was the first experimental proof that we do not live in a

20 steady-state universe, but rather a dynamic and expanding one.

164. Which of the following best expresses the main idea of the passage?

- (A ) Edwin Hubble discovered Hubble's Law , a benchmark in modern physics.
- (B ) Hubble discovered that the universe is expanding, disproving the theory of the steady-state universe.
- (C ) Before 1929, most physicists supported one of two theories of the universe.
- (D ) All objects in space are receding from each other because of the expansion of the universe.
- (E) Modern physics would not have progressed without Hubble's discovery of the expanding universe.

165. Which of the following is not mentioned in the passage regarding Hubble's experiment in which he deduced Hubble's Law ?

- (A ) It used years of data on Cepheid variable stars.

- (B ) Hubble accumulated data using the Mount Wilson Observatory and help from a fellow astronomer. (C ) Hubble found that all the observed stars appeared to be moving away from Earth.
- (D ) Hubble deduced the distance to Cepheid variable stars based on the rate at which they blinked and flickered.
- (E) Hubble deduced the velocity of Earth to find the stars' absolute velocities.

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Consider each of the answer choices separately and indicate all that apply.

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166. Which of the following can be properly inferred from the passage?

- ☐ The steady-state universe theory does not allow for an expanding universe.
- ☐ The closer any two points in the universe are, the less expansion effects them, and the slower they appear to be moving apart.
- ☐ After Hubble's discovery of the expanding universe, the Big Bang was the only cosmological theory that could be valid.

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Questions 167–169 are based on the following reading passage.

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Homer's *The Odyssey* is an epic poem putting a popular oral myth into writing for the first time. *The Histories* is an attempt by its author Herodotus to provide an **unbiased** account of historical conflicts in the Hellenistic world. These two works share two important motifs: the interference of the gods in the events of the mortal world, and the concept of a

predetermined and unavoidable destiny. One might assume that these two themes are one and the same— a predetermined fate set forth by the gods. However, Homer's and Herodotus's gods are presented as acting in a

- 5 political fashion— each one acting within certain boundaries to accomplish his or her own agenda. As such, the wills of the gods do not coincide to allow for the formulation of a cohesive “master plan.” Instead of destiny created by the gods, Homer and Herodotus present fate as something beyond the gods— a driving force under which the actions of gods

- 10 and mortals lead to the realization of destiny. In *The Odyssey* and *The Histories*, the idea of gods with limited power leads to a conception of fate wherein the gods act not as the creators of destiny, but as agents of its fulfillment.

167. Which of the following, if true, would most strongly support the assumption rejected by the argument of the passage?

- (A ) The gods pursue their agendas by conferring with other gods to ensure that their agendas serve a common goal.
- (B ) The agendas of gods and mortals frequently coincide with the demands of fate.
- (C ) Homer and Herodotus disagree strongly about the motives and agendas of the gods, as well as about the nature and severity of their conflicts.
- (D ) Destiny would be fulfilled regardless of what activities gods and mortals engaged in.
- (E) In both Homer and Herodotus, gods and mortals frequently examine their motives and goals and are capable of making their own decisions about what to do.

168. The author most likely uses the term *unbiased* to convey which of the following ideas?

- (A ) The historical conflicts are presented in a way that precludes religious explanation.

- (B ) The historical conflicts are presented in a way that does not favor any particular party to the conflicts. (C ) The subjects of the histories are not restricted to any particular ethnic, social, religious, or geographical group.
- (D ) The historical conflicts are explained entirely by reference to the actions of the people and states involved in them .
- (E) This histories are written in such a way as to challenge the sensibilities of their readers.

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Consider each of the answer choices separately and indicate all that apply.

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169. Which of the following can be inferred about the gods in *The Odyssey* and *The Histories*?

- ☐ There are limits to what the gods can accomplish.
- ☐ The gods, like human beings, pursue their own interests.
- ☐ The gods do not control the final outcomes of their actions.

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**Questions 170–172 are based on the following reading passage.**

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The goal of a sunscreen chemical is simple—to prevent harmful U V B (and in some cases U V A ) radiation from penetrating the skin. There are two main ways in which this goal can be accomplished—by reflecting (physically blocking) ultraviolet light or by absorbing U V light. Sunscreen chemicals are therefore put into two groups based on which method they employ; they are classified as either *physical blockers* or *chemical absorbers*. Physical blockers, the most common of which is titanium dioxide, scatter all radiation in the U V B and U V A range. Titanium dioxide reflects light waves in the 290–770 nm range. However, the vast majority of commercial sunscreens are chemical absorbers.

Chemical absorbing sunscreens work on the principle of photo-excitation of electrons. They absorb photons of light of specific wavelengths and use the energy to promote electrons between energy levels. When the electrons later return to the ground energy state, they emit light at longer wavelengths (lower energies). Chemical species that exhibit this behavior are called chromophores. The specific wavelength absorbed by a given chromophore is determined by the discrete quantal amounts of energy that are required to excite electrons between the energy levels of its molecules. Since the primary objective of an absorbing sunscreen is to absorb U V B light (290–320 nm ), the best sunscreens are those that absorb most heavily in this range. The chromophores that most readily fit this requirement are those with conjugated pi-bonding systems.

170. Which of the following best summarizes the distinction between chemical blockers and chemical absorbers?

- (A ) Chemical blockers darken their target light waves while chemical absorbers lighten them .
- (B ) Chemical blockers convert their target light waves into radiation while chemical absorbers convert them into a different kind of radiation.
- (C ) Chemical blockers disperse their target light waves while chemical absorbers convert them into light with a longer wavelength.
- (D ) Chemical blockers scatter their target light waves while chemical absorbers convert them into radiation.
- (E) Chemical blockers prevent light waves from reaching the skin while chemical absorbers absorb them into the skin.

- 171.Based on the passage, which of the following can be inferred about the chromophores referred to in the final sentence of the passage?
- (A) If exposed to light with wavelengths of approximately 300 nm, they will scatter the radiation.
  - (B) If exposed to light with wavelengths in the 290–320 nm range, they will lower the energy level of some of their constituent electrons.
  - (C) If exposed to light waves in the 290–770 nm range, they will absorb the photons and emit them as light of longer wavelengths.
  - (D) If exposed to light with wavelengths of approximately 300 nm, some electrons in their component molecules will switch to higher energy levels.
  - (E) If exposed to light waves in the 290–320 nm range, they will promote the discrete quantal amounts of energy that are required to excite electrons between energy levels.
172. Select the sentence in the second paragraph that explains the physical feature on the basis of which one could select a chromophore for a sunscreen that would protect against UVA radiation.

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**Questions 173–175 are based on the following reading passage.**

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- The story of *Sir Gawain and the Green Knight* has its foundation in Arthurian legend as formulated and passed down by the pagan oral tradition. In its written form, however, the tale bears the marks of Christian influence—it contains numerous scriptural and doctrinal references to Christianity. Since the author of *Sir Gawain and the Green Knight* is unknown, it is difficult to determine with any certainty the extent to which he was responsible for the incorporation of Christianity into the legend. For all we know, the story may have been “Christianized” in its oral form long before the poet set it into writing. The poet himself supports this possibility by writing in the opening lines that he will tell “anew” the tale “as I heard it in hall.” If this is the case (and even if it is not), it is distinctly possible that the heroes of the Arthurian tradition represent in the written form a pagan interpretation of Christian ideals, rather than an externally imposed Christianization of pagan codes of behavior.
- While it could certainly be argued that the poet portrays Sir Gawain as a good Christian hero in an attempt to infuse the story with Christian values, the critical tone of the narrative seems to suggest a different conclusion—that by critically editorializing the paganized form of Christianity embodied by Sir Gawain, the poet is trying to correct what he sees to be the flaws of that form. From the perspective of this conclusion it is clear that the poet only “Christianizes” the traditional legend to the extent that he *criticizes* the pagan interpretation of Christianity that is inherent in the behavior of its heroes.
- Those who would argue that the poet intends to portray Sir Gawain as the perfect Christian hero would point to the descriptions of his chivalric qualities. The poet does indeed describe Gawain’s Christian virtues generously; he even makes a special aside early in the second fit to describe the significance of the pentangle embossed on Gawain’s shield, and to explain “why the pentangle is proper to that peerless prince.” The author then delves into a lengthy enumeration of Gawain’s Christian virtues. What is more, the fact that he uses the pentangle—a pagan symbol—to do it would seem to suggest that the author does indeed intend to add a Christian interpretation to the pagan legend he is retelling. Taken in its larger context, however, this passage takes on a different significance. In further examination of the poet’s descriptions of Sir Gawain, it becomes apparent that the knight’s seemingly perfect Christian behavior is superficial. A contrast can be observed between his “Christian” words and actions and his decidedly un-Christian motives. One theory is that, by emphasizing this contrast, the poet

30 intends to denounce the pagan “misunderstanding” of the Christian message.

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Consider each of the answer choices separately and indicate all that apply.

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173. Which of the following can be inferred about the pagan and Christian origins of *Sir Gawain and the Green Knight*?

- ☐ As an orally-hand-down tale, it was pagan, but as a written tale, it was Christian.
- ☐ Sir Gawain was a knight in King Arthur's court.
- ☐ *Sir Gawain and the Green Knight* contains both Christian and pagan elements, although it is not clear that either perspective is dominant.

174. Which of the following can be inferred from the author's interpretation of the Christian aspects of the poem presented in the third paragraph?

- (A) Pagans and Christians differ in their interpretations of the Christian symbolism in the story.
- (B) A pagan cannot have motives that are acceptable from a Christian perspective.
- (C) A pagan story cannot be used to convey a Christian attitude.
- (D) Christianity was absent in Arthurian stories before such stories were written down.
- (E) Being a good Christian involves having both the right actions and the right motives.

175. Which of the following, if true, would most undermine the “theory” mentioned in the final sentence of the passage?

- (A) Sir Gawain is portrayed as disingenuous in his exercise of “Christian virtues.”
- (B) Another character in the story is also associated with pagan symbols and is praised straightforwardly for her Christian virtues.
- (C) Sir Gawain, in the story, prays to God to help him in battle.
- (D) Another character in the story is associated with pagan symbols but is portrayed as having no Christian virtues whatsoever.
- (E) A group of people in the story are portrayed as “barbarians” who are neither pagan nor Christian.

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**Questions 176–177 are based on the following reading passage.**

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Various tales in Herodotus's *The Histories* display a circular means of the realization of fate. In one story involving the birth of Cyrus and his rise to power in Asia, Herodotus tells us that the Median king Astyages was having disturbing dreams about his daughter Mandane.

We are told that his first dream, in which Mandane's urine flooded all of Asia, was interpreted ominously by the Magi. As a consequence, when the time came to marry Mandane off, Astyages made what turned out to be a fatal mistake. While there were plenty of wealthy and powerful Medes eligible for marriage, 5 “his fear of the dream made him refuse to marry her to any of them; instead, he gave her to a Persian called Cambyses, whom he found to be of noble lineage and peaceful behavior, although he regarded him as the social inferior by far of a Mede of the middle rank.” Essentially, Astyages altered what would be a normal treatment of the marriage in order to marry his daughter to someone less threatening. This attempt to avoid the prophesy of the first dream

10 backfired however, and when Mandane became pregnant, Astyages had another foreboding dream. This second dream was interpreted to mean that Mandane's son would rule in Astyages's place. Herodotus tells us that “[the

prophecy of the second dream ] was what A styages was guarding against” when he again took action,telling his advisor H arpagus to kill the baby.This plan backfired as well since H arpagus refused to kill the baby,leading to a 15 complicated chain of events whereby the child— later to be named C yrus— survived and returned to conquer his grandfather’s kingdom .In this story,A styages’s downfall is depicted as resulting directly from two major mistakes— marrying M andane to C am byses and telling H arpagus to kill their offspring.These mistakes in turn are shown to be motivated by fear of the 20 prophecies of his downfall.H ad not some divine force planted the dreams in his head,he would not have taken the steps necessary to fulfill those prophecies.Through this circular path,destiny is unavoidably realized.

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Consider each of the answer choices separately and indicate all that apply.

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176.Which of the following can be inferred from the passage about A styages’s view of the Median socio-political structure?

- ☐ A As a result of his first dream ,A styages believed the threat his daughter posed to him could be through her husband.
- ☐ A styages believed that it is always best to observe the recommendations of the Magi.
- ☐ A styages believed that a Persian noble was less of a threat to his position than a Median noble.

177.Which of the following,if true,would most strongly undermine the claim that A styages’s downfall proceeded from two major mistakes?

- (A ) M andane’s son would have conquered his grandfather’s kingdom regardless of who his father was.
- (B ) A styages’s first dream was in fact a warning against allowing his daughter to marry.
- (C ) H arpagus would not have killed the baby regardless of whether he knew the prophecy.
- (D ) M andane’s husband would have deposed A styages if he had known why his son was killed.
- (E ) A styages’s dreams were better interpreted as advising him not to do anything out of the ordinary.

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**Questions 178–180 are based on the following reading passage.**

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Nineteenth century painter Albert Bierstadt’s view of his artistic skill as a vehicle for self-promotion is was evident in his choices of style and subject matter.From the debut of his career with the exhibition of *Lake Lucerne* (1856),he developed a fixed style that was most easily recognizable for its size— the largest of the 636 paintings on display at the exhibition,it was over three meters wide.This,coupled with the artist’s ability to represent the optimistic feeling in

5 America during the westward expansion,is what led to Bierstadt’s explosive growth in popularity during the 1860’s.Bierstadt deliberately appealed to those rich patrons— railroad tycoons and financiers— whose nearest substitute to making the arduous journey out West was to purchase a hyperbolized replica of a Western vista.

But trends following the Civil War produced a drastic shift away from the adventurous optimism of the pre-war era and toward a more subdued appreciation for the details of American life.In this new social

10 context,the paintings now seemed too decadent,too gaudy,for the new philosophy taking root in the country following the horrors of war.As one commentator in 1866 put it,Bierstadt’s work “may impose upon the senses,but does not affect

15 the heart.” In a sense,then,that same American pride upon which Bierstadt had capitalized to advance his success was now ,in its fickleness,the source of his downfall.

178. According to the passage, the new “philosophy” taking root in America after the Civil War would be best described as

- (A ) justifiable pessimism
- (B ) somber realism
- (C ) restrained minimalism
- (D ) prideful idealism
- (E) stubborn dogmatism

179. The passage makes use of the phrase in quotations primarily in order to

- (A ) challenge a prevailing thesis
- (B ) point out an erroneous assertion
- (C ) provide expert testimony
- (D ) highlight a controversy
- (E) offer evidence supporting a claim

180. All of the following are mentioned as contributors to Bierstadt’s success EXCEPT:

- (A ) the dimensions of his paintings
- (B ) his ability to convey auspicious feelings
- (C ) subdued appreciation for the details of American life
- (D ) catering to the preferences of the wealthy
- (E) portrayals of exaggerated landscapes

# Reading Comprehension Answers

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1.(C ).This question focuses on the main idea of the passage.The reading constantly flips back and forth,taking one side at first,then another on the *forecast for American entrepreneurship*.The author is careful to present his or her arguments fairly and with some reservations (e.g.,*it is not clear that... ,suggests that... ,may seem ... ,does not necessarily... ,it may not bring... ,can be...* ).Ultimately,the view is balanced,or *nuanced*.Regarding choice (A ),the author does not *propose changes*.Regarding (B ),the author never argues that any group of college students should (or should not) form their own companies.If anything,the author offers both sides of the issue,leaving it up to individuals to decide.Regarding (D ),the author offers one fact about the varying rates at which businesses of two types (low -value and high-value) are founded.However,the author never evaluates the viability (or likelihood of success) of these types.As for (E),the analogy drawn in the last two sentences is not the main point of the passage;it is a final observation,one that sheds light on the issue,but this analogy is not the primary purpose for which the passage was written.

2.(B ).The question asks for a specific detail mentioned or clearly indicated in the text.You should look for very direct proof for the answer choice you pick.Specifically: *College graduates,unable to find traditional jobs,instead opt to start their own businesses*.You should look for a match for this concept,slightly reworded at most. Correct choice (B ) matches the idea that college graduates are *unable to find traditional jobs*.Regarding (A ), college graduates who start their own businesses may indeed be hampered by a lack of access to outside investment, but this is not offered as the reason that they start such businesses.Be careful of answer choices that restate truths from the passage but do not answer the specific question posed! As for (C ),it may be true that low -value companies have become more prevalent,but again,this does not answer the specific question.Regarding (D ),the choice between renting and buying property is offered only as an analogy,not as a literal choice for college graduates (let alone as the reason for their entrepreneurial decisions).Regarding choice (E),you are told nothing about how forecasts of the unemployment rate are likely to evolve.

3.(E ).This question asks you what “can be inferred” about the number of American high-value businesses.The answer choices reveal that specifically,you should focus on how this number has changed (or may have changed) during the course of the recent recession.For an Inference question,you will need proof from the passage,but you will typically need to transform that proof — you are not simply asked to look up a fact,and you should be wary of simply matching language in the text to language in the choices.However,you should also recognize that there is no fuzziness or room for interpretation.The answer you come to must be rock-solid.In particular,when you encounter mathematical language,you should take extra care to make our argument airtight mathematically.Looking up the key phrase *high-value businesses*,you find that *the proportion of high-value businesses founded each year has declined*.Watch out! As you know from the math side of the GRE,a proportion is not the same as a number.The proportion has fallen, but you are also told that the overall number of new business starts has been higher over recent years.If the overall number is up,but the proportion is down,you cannot tell whether the absolute number of high-value businesses is up or down.(E) is correct — what has happened to the number you want is unknown.

4.(C ).You are told that women went to war *as nurses or in providing supplies* and that *such women*,including many old women,died in battle.Therefore,*Some of those who worked as nurses or in providing supplies died in battle*. In (A ),you do not know how other people felt about (*lamented*) or marked the deaths of anyone who died in battle.You also do not know anything about the courageousness of younger women (B ),or anything about the status of men in American culture ((D ) and (E)).

5.(E ).The first paragraph introduces bacterial “super-bugs” with some alarm .The second paragraph increases the



alarm, noting how *many scientists argue that the human race has more to fear from viruses*. This paragraph describes the way in which viruses hijack the cell, in order to illustrate how tough viruses are to treat. The last paragraph continues the comparison and puts a stake in the ground: *bacteria lack the potential for cataclysm that viruses have*. This last point is illustrated by the *near-miss* you have had with the HIV pandemic. As for choice (A), you are never told how bacteria infect the body. Regarding (B), the hijacking process is certainly described, but to make a larger point: why it's hard to eradicate viruses, in comparison with bacteria. As for (C), after reading this passage, you may want to call up the CDC and donate money, but the passage itself only raises a warning, if even that — it is not a call to action. Regarding choice (D), the last paragraph does highlight your good fortune, but this is not the larger point of the whole passage. (E) is correct — the passage compares the two threats (bacteria and viruses) and judges viruses to be far more important (after all, viruses have the *potential for cataclysm*).

6. **(B)**. In this Inference question, you must be careful to focus on the keywords you are given: *infections by bacteria* (which you could rearrange to *bacterial infections*). What do you know from the text about bacterial infections? Toward the end of the second paragraph, one sentence gives you a direct clue: *viral infections cannot be treated ex post facto in the way that bacterial infections can*. So you can infer correctly that bacterial infections **CAN** be treated “ex post facto” (it means “after the fact”). You should look for a match to this idea. Choice (B) gives you what you want. The extra phrase *by antimicrobial agents* isn't much to add; this term is used at the beginning of the passage, and all it means is “stuff that works against microbes, i.e., bacteria.” Regarding (A), from the beginning of the second paragraph, you know that bacteria themselves *reproduce asexually through binary fission*, but you don't know that to be true about infections by bacteria. Regarding (C), resistance “cocktails” such as NDM-1 actually make bacteria “nearly impregnable.” So an infection by bacteria that have this cocktail would be less vulnerable, not more vulnerable. Choice (D) is true about viral infections, not bacterial infections. Choice (E) makes little sense; you know only that the virus does critical damage to the host cell. In fact, it does not seem that bacteria infect organisms in the same way, so it might not even make sense to speak of the “host cell” of a bacterium.

7. **(A)**. This Specific Detail question requires you to determine what is true about *intracellular obligate parasites* (or IO Ps, to give them a temporary abbreviation). Going back to the passage, you read this: *Whereas bacteria reproduce asexually through binary fission, viruses lack the necessary structures for reproduction, and so are known as “intracellular obligate parasites.”* The word so toward the end tells you that the reason viruses are called IO Ps is that they *lack the necessary structures for reproduction*. You are looking for this idea, perhaps slightly restated. (A) is correct.

8. **(B)**. Before reading the choices, it is helpful to determine for yourself what the main idea is. Is the passage really about supernovae, or is it about Galileo, the philosophers, and the ideas being discussed? The fact that the “twist” occurs in the second paragraph (you're not talking just about science — now you're talking about history and philosophy) supports the position that the second paragraph is more central to the main idea and that the first paragraph is just background information. Choice (A) is wrong because it does not mention the main content of the second paragraph, the ideas and assumptions that became controversial. It is also *much* too broad — giving a history of supernovae would take a lot more than two paragraphs. Choice (B) is correct — the passage does describe a “shift in thought” (from an unchangeable “heavens” to a more scientific view), and this shift (at least among intellectuals in Padua) was prompted by a “natural event” (the supernova). Choice (C) is attractive (*juxtapose* means “to put next to one another” or “to compare”), but does not describe the main idea. While Galileo and the philosophers certainly had different views about the bright light they saw in the sky, it's not clear that you can say that the philosophers had “views about supernovae” in general. Choice (D) can be stricken simply due to “corroborate” (to prove true or support with evidence). The passage is describing, not making an argument. Finally, choice (E) is *much* too broad! You could spend an entire career discussing *how science and philosophy interrelate*. This passage covers a much more narrow topic.

9. **I only**. Remember that Inference questions are *not* asking you to think for yourself. You must not make any assumptions or go beyond the information in the passage. Statement I is true because you can prove it with the first

sentence of the second paragraph. *In 1604 in Padua, Italy, a supernova became visible, appearing as a star so bright that it was visible in daylight for more than a year.* Since this supernova was visible for more than a year, it is possible for supernovae to *take more than a year to fade from view*. (Note that if Statement I said “Supernovae always take more than a year to fade from view,” it would be wrong.) The second statement cannot be proven. Just because you are told that a supernova in 1604 caused a stir does not mean no one else had ever seen one before. The third statement also cannot be proven. You know that Galileo disagreed with the philosophers; you don’t know that those particular philosophers ever changed their minds.

10. **(C)**. As a result of the supernova in 1604, Galileo gave popular lectures in which he “sought to explain” the origin of the “star” and which “undermined the views” of some philosophers. That’s all you know. Choice (A) is a bit silly — was the Earth created after 1604? This choice took some wording from paragraph and twisted it around to trick us. Choice (B) is too extreme — you know that Galileo *sought to explain* the origin of the supernova, but you don’t know that he succeeded. Choice (C) is true — you are told that the lectures were *widely attended by the public*. (A very picky person might point out that just because people go to a lecture doesn’t mean they are interested, but all of the other answers are definitely wrong, so that confirms that this is a reasonable — that is, very tiny — inferential leap.) Choice (D) is attractive, but is a trap answer. You know that Galileo, in his lectures, “undermined” (weakened) the views of the philosophers. But you don’t know what the philosophers’ response was, and you certainly don’t know whether the philosophers were opposed to the lectures themselves (a person could be opposed to the ideas in a lecture but still think the lecturer should be allowed to lecture). Choice (E) is also attractive because you, as a modern reader, know this to be true in real life. However, the question *does not* ask, “What really happened?” It asks “*The author mentions which of the following as a result of the supernova of 1604?*” The author does not mention that the philosophers were “proved wrong.” (Their views were “undermined,” which is much less extreme.) You cannot validate this answer choice with evidence from the passage.

11. **I and III only**. Kincaid’s critics point out that Britain’s government is not as corrupt as Antigua’s. Kincaid makes a witty rejoinder, but does not deny that the British government is less corrupt than Antigua’s. This, coupled with her stated belief that Britain is responsible for corruption in Antigua, justifies the first statement. As for the second statement, it would not be surprising if Kincaid did think this, but no governments of the “former colonial empire” are discussed in the passage except Antigua’s. Finally, the third passage refers to “Antigua’s current problems, including drug dealing and selling off land for tourist properties,” so the third statement is true.

12. **(B)**. In main idea questions, you can often eliminate one or more answers just based on the first word or phrase: *relate, discuss, give a history, make a case, emphasize*. Does the passage “make a case”? It doesn’t — like almost all GRE passages, it is merely reporting facts and/or the opinions of others. *Emphasize* is also a bit strange — usually, the purpose of a passage is something a little bigger than just “emphasizing” something. When you read the passage, you may have determined that the first paragraph simply gives background information about *Don Giovanni*, while the second paragraph gives the “twist” — even though almost the whole world loved *Don Giovanni*, people in Mozart’s own hometown were less enthusiastic about it. Choice (B) matches this — the passage discusses how a work of art (the opera) has been met by diverging (different, diverse) responses, specifically those of Viennese audiences versus those of everyone else.

13. **(A)**. The full sentence is, *The opera mixed traditions of minimalism with those of comedy — a practice heretofore unknown among the composer’s works — creating a production that was not well liked by conservative Viennese audiences*. Regarding Mozart’s *mixing traditions of minimalism with those of comedy*, the clue *a practice heretofore unknown among the composer’s works* tells you that Mozart had not done this before. Furthermore, the clue *not well liked by conservative Viennese audiences* tells you that Viennese audiences did not like this because it was a departure from tradition. Correct answer (A) is a good match — a “lackluster reception” means that those who “received” something (the audience) were holding unimpressed. Note that the GRE is trying to hide the correct answer from you a little bit by saying “a particular group of people” for “Viennese audiences.” Also note that (D) and (E) could be eliminated straightaway — the author does not “argue” or “undermine” (which would mean the author was

arguing) at any point. Obviously, talking about moralism and comedy doesn't "remind the reader of the plot" (B), and you have no idea (from the passage, at least) what is common in contemporary (modern) opera, so (C) is out of scope.

14. **(E)**. You know that Viennese audiences did not like the (new) mixing of moralism and comedy because the audiences were "conservative." But there's an even better clue: the passage says *eighteenth century audiences in Vienna — Mozart's own city — were ambivalent at best. Ambivalent means "having mixed feelings or undecided."* *At best* is an expression meaning *or worse*. (E) is a direct match with a sentence from the passage. Note that (A) and (B) contain extreme language (*purely, unequivocally*). Choices (C) and (D) go too far. You have no indication that audiences were confused or offended, merely that they didn't like or had mixed feelings about a work of art.

15. **II and III only**. Regarding the first statement, watch out for extreme language! Redlining never "ceased"; you are told it *may have continued in less explicit ways*. The same part of the passage provides good support for the second statement — redlining has become less *explicit, or overt*. Finally, you are told that *With no access to mortgages, residents within the red line suffered low property values*. Thus, access to mortgages is related to higher property values.

16. **(D)**. You are told that *reverse redlining occurs when predatory businesses specifically target minority consumers for the purpose of charging them more*. Choices (A) and (B) describe *regular* redlining, the practice of denying service or constraining access to something like jobs. Redlining is about businesses, not police, so (C) is out. Choice (E) does mention targeting minority consumers, but does not give an example of offering inferior products or overcharging (reverse redlining is discriminatory, and choice (E) describes a perfectly normal advertisement). Choice (D) is a perfect match, and a good example of what is described in the third paragraph.

17. **(E)**. In the first paragraph, you are told that *With no access to mortgages, residents within the red line suffered low property values and landlord abandonment; buildings abandoned by landlords were then likely to become centers of drug dealing and other crime...* The lack of access to mortgages is due to redlining. Thus, redlining causes landlord abandonment and the resultant effects — (E) is a perfect match. Note that (A) mentions "subprime mortgages" and "defaults," which are never mentioned in the passage. (B) incorrectly cites reverse redlining rather than redlining. (C) gets the relationship between redlining and landlord abandonment backwards. (D) is just wrong — "constrained access to health care, jobs, insurance, and more" is mentioned as part of the *definition* of redlining.

18. **I and III only**. You are told that "germophobic" Western society eschews premastication, which provides "beneficial bacteria," so the first statement is true. The word *only* kills the second statement — watch out for extreme language! If just one person outside of the developing world premasticates food for a baby, this statement is false, so you cannot infer it. Finally, you are told that *babies also received antibodies and digestive bacteria from the mother's saliva*, so saliva has at least one benefit (antibodies) aside from digestive bacteria.

19. **(B)**. The author discusses Bois and Damisch's metaphor ("a dynamic game"), calls it misleading, and proposes an expansion beyond the competitive aspect. (A) is incorrect, as the author does not claim that the two artists were the best. (C) only addresses the details and evidence presented in the passage but not the main point. (D) and (E) are both distortions because the passage does not rank the painters, and these issues are again not the point.

20. **(D)**. This question type asks for a combination of the point, tone, and, perhaps, structure. The author expresses the point at the end of the first paragraph by suggesting that the rivalry between Picasso and Matisse was more of a dialogue or exchange. (A) is an incorrect comparison because the passage rejects the idea that such rivalries are mere competitions. (B) distorts a detail by adding an opinion not stated in the passage. The author writes about the artists employing multiple styles, but never implies they are masters *because* they employ multiple styles. (C) is a distortion based on misreading the "conversation" metaphor. (E) is incorrect, as the word *generally* is a claim that the author does not make; you are only told about one particular rivalry.

21.(C ).In the last paragraph,the passage states that M atisse used the sam e palette in his w ork but om itted the green. (A ),(D ),and (E) are incorrect because they cite com m ents about *Large Nude in a Red Arm chair*,not *Woman with Yellow Hair*.(B ) is backw ards — the passage states that M atisse’s response,as opposed to Picasso’s w ork,did not rigidly tie color to form .

22.(E ).In the third paragraph,the author refers to M atisse as the older artist.Choice (A ) is not true;the phrase “sensuous,rich m ood” w as used in the passage to describe a w ork by M atisse,not *Large Nude in a Red Arm chair*. Choice (B ) is w rong because the author,at the end of the passage,uses *seem s to be saying* and that indicates that it w as not actually said.(C ) is incorrect — the passage states that they w ere “occasional friends.” (D ) is a distortion;the passage only says that M atisse’s response cam e a decade later,not that he had w orked on it throughout that tim e.

23.(B ).The author’s point w as that the rivalry w as m ore of a dialogue than a com petition.(A ) and (E) are not correct because those choices do not say anything about the nature of the rivalry and no m ore can be assum ed.(C ) is w rong because the author’s point w as that their relationship w as m ore than a com petition.(D ) m isconstrues the m etaphor that the author rejects.

24.(C ).The last paragraph devotes itself to highlighting the problem atic im plicit m essages of tim elines.(A ) is a distortion;the author does not claim dates are unim portant but that historical study should go far beyond m ere dates. (B ) and (E) are backw ards,as these are tw o of the im plicit m essages that the author rejects.(D ),w hile quite likely, does not have to follow — the author im plies that there is m ore to history than *w ars and m inor battles,punctuated by the occasional presidential election and technological innovation* but does not specify that content.

25.(D ).Essentially,this question tests vocabulary.The point of the passage is the problem s w ith tim elines,and the ending is a w arning — portentous can m ean “om inously significant.” The w ords in (A ) w ould never describe a G R E author.In (B ),the author is not bem used,or am used,at all.N or is the author resigned or com placent.(N ote: it w ould be rare for a G R E author to be called *negative*,but this passage w ould arguably be just such a rarity.)

26.(D ).The last paragraph discusses the negative im plicit — or sublim inal — issues w ith tim elines.In that paragraph, since the author indicates that an im plicit flaw is show ing “only” 64 events,it m ust follow that there are m ore.(A ) is out.In the second paragraph,the author w orries that the prom inence of the dates w ill draw too m uch attention,so elim inate (B ).In the first paragraph,the author says,*D espite their usefulness in allow ing students to gain a cursory know ledge...* This m eans that tim elines have som e positive uses.cross off (C ).A s for (E),in the last paragraph,a flaw cited is that tim elines portray an “official” history;thus,unofficial histories m ust have virtues.

27.(B ).In the last paragraph,a listed im plicit flaw is that the events are presented as independent — w ithout context. The passage m entions their prom inent placem ent (A ) and use of photos (E),but does not suggest that these are the problem s.(C ) is false,as the passage states these tim elines had beginnings and ends.R egarding (D ),the author does not challenge the factual accuracy of tim elines.

28.(C ).*M yopic* m eans “near-sighted,” and the author em ploys it to describe the inability of som e curricula to see the big picture.Sim ilarly,*purblind* m eans “partially blind or deficient in understanding.” (A ),(B ),and (D ) are not justified by evidence from the passage — ignorance and bigotry are not m entioned as problem s.*Astigm atic* indicates visual distortion,but the passage spoke of m issing elem ents.*M ordant*,m eaning “caustic or corrosive,” has no connection to the passage.

29.(A ).The second paragraph further describes one of the tw o factors nam ed in the first paragraph.(B ) is incorrect because the passage does not contrast the factors (the second paragraph does not even m ention the D iam ond N ecklace

A fair). (C ) is out of scope and irrelevant as the passage is about Marie Antoinette's unpopularity, not the court or corruption. (D ) is incorrect; the last paragraph discusses the results. (E), while arguably the main point of the passage, goes beyond that of the second paragraph, which does not discuss consequences.

30. (C ). The third paragraph mentions *countless aristocrats who sued to the king on Rohan's behalf*, so it must be true that a significant proportion was more loyal to the accused. Nothing in the passage refers to jealousy and nothing implies that the queen's wealth was the cause of the aristocrats' dislike. (A ) can be eliminated. (B ) does not have to follow; the passage only says pamphlets were popular with the general public — it could, but doesn't have to be true that a large percentage of aristocrats read them. Similarly, the passage does not give such literacy rates so they, no matter how likely, cannot be assumed. (D ) is out. (E) is completely out of scope.

31. (D ). This detail question concerns the second paragraph, which cites a reduction in royal censorship as a cause. (A ) is out of scope; the education of women is never mentioned. (B ) is a distortion; the passage says publications, not the literacy rate, tripled. (C ) is incorrect, as the passage does not discuss the number of scandals over time. (E), however likely, is not mentioned in the passage.

32. II and III only. The first statement can't be proven — the passage does not indicate who the clever forger was. The second statement is correct — the passage identifies Rohan as a "social climber." In the third paragraph, the author states that *10,000 people came to the doors of the Bastille demanding Rohan's release*.

33. I only. The point of the final paragraph is that the queen's unpopularity caused significant problems for the monarchy. You do not know if the queen met Rohan; she wouldn't have to meet someone personally to order that he be punished. The third statement is backwards: the queen's power must have had limits since Rohan was released despite her prosecution.

34. (C ). This is essentially a vocabulary question. *Disinterested* does not mean "uninterested" — it means "unbiased." GRE authors are never described as *arrogant* or *supercilious*, as these words are too negative (and inappropriate). It is also very unlikely that *prim*, *meretricious*, or *lascivious* would be correct for the same reason. As for (E), the author is *analytic*, but no phrases or adjectives in the passage justify *enthusiastic*.

35. (C ). After the theory is described, the remainder of the passage cites studies and opinions that disagree in part or in whole. (A ) is incorrect because no additional support is provided. (B ) is incorrect, as the criticisms are not a *screed*, which is a long diatribe (and would be inappropriate from a GRE author). (D ) is incorrect because it is not the author's credentials that are questioned. (E) is wrong — there is no ridicule. Note that (B ), (D ), and (E) all express inappropriate attitudes for a GRE author. While authors can certainly argue for or against something, or express some enthusiasm or support, GRE authors do not rant and rave, and only very, very rarely *ridicule*, or question the integrity of those with whom they disagree.

36. (D ). In the second paragraph, D'Emilio's critics question his use of the word *free*. (A ), (B ), and (C ) are topics that are not mentioned. (E) is at best a distortion — while one critic argues, in opposition to D'Emilio, that industrial capitalism worsened the position of women, the issue is not framed as one of sexism.

37. (E ). The Lowell Girls are mentioned to show that historically *free labor has hardly been free at all*. (A ) is incorrect — that is the subject of the last paragraph, but does not concern the Lowell Girls. (B ) is incorrect — that is the subject of the third paragraph, but does not concern the Lowell Girls. The answer must come from the part of the passage referenced. (C ) is backwards — this argument is put forth by D'Emilio's critics. (D ) is a distortion, the reference is to show how historically normal this situation was, not to contrast two supposedly parallel groups of unempowered workers.

38. **(C)**. The answer has to be something that *must* follow from the discussion of Davis in the last paragraph, not something that he or she *could* or *likely would* agree with. (C) is correct because Davis argues that women *were the losers in a double-sense ... leaving many women largely bereft of significant economic roles*. If being “bereft” of an economic role makes one a “loser,” it is not going too far (in fact, it is less extreme) to say that *People without economic roles are disadvantaged*. (A) is wrong, as it is an opinion of Delmonico’s mentioned in the first paragraph. (B) is wrong, as it is an opinion of Enloe’s mentioned in the second paragraph. (D) In the last sentence of the passage, Davis actually states that the “entire economy” has left the household.
39. **(C)**. A “best title” question asks for the main point. The point of this passage was to highlight trenchant criticisms of Delmonico’s work — the lack of any rebuttal of these points indicates that the author sympathizes with them. (A), (D), and (E) are incorrect because they ignore that the passage concerns scholarly opinions rather than the history itself. (B) is incorrect, as no reconciliation is attempted. Additionally, (E) is closer to Delmonico’s view than the author’s.
40. **(D)**. “Unique” is a secondary meaning of *peculiar*. The author uses it in the context of Matisse learning something that Picasso had done. Of the wrong answers, (B) and (E) at best come from prohibited outside knowledge, whereas (A) and (C) are the opposite of the intended meaning — anything *strange* or *unknown* to Picasso would be something he doesn’t do; *peculiar to Picasso* means something that he’s known for doing.
41. **(A)**. The author both describes the work (*The Ochre Head*) and the inspiration for that work (*Still Life with Ancient Head*). (B) is a distortion, as the passage does not rate the painters. (C) is a distortion as the passage describes a painting but not how the artist developed his style. (D) is incorrect, as the passage indicates that this was a new direction rather than a representative work. (E) is out of scope because the passage only discusses two painters, not the art world.
42. **(C)**. While the author clearly appreciates the work, its place in the hierarchy is not discussed. (A) is incorrect — the passage states that *colors ... refuse to be constrained by definite lines of form*. (B) is wrong as the end of the passage states that the painting’s composition references a Picasso work. (D) is backwards — the passage says the technique is not employed with the free reign used in *Minotaur*. (E) is wrong as the passage says a vase of flowers and a bench are depicted.
43. **(C)**. To answer a question of this type, one must find the other four choices in the text. In the third paragraph, (A) is mentioned verbatim. (B) is justified by “hearing speakers,” and (D) by “wrote autobiographical essays.” (E) is mentioned explicitly.
44. **(D)**. The passage, after establishing problems with textbooks, proposes film as a vehicle for teaching history. Since film is mentioned as a current alternative, it is being used now to teach history, but the author would like to expand this use. *Didactic* means “intended to instruct,” so films used to teach history would certainly qualify as a “didactic tool.” (A) is out of scope and ignores the educational thrust. (B) and (C) do not include the bulk of the passage, which propose film as a learning tool. (E) is too negative — a GRE author would not *denigrate* — and *philosophy* is an inappropriate word for the passage (using textbooks is hardly a *philosophy* so much as just a common practice).
45. **(B)**. The answer to detail questions must be found in the text, not through your own reasoning. The second paragraph quotes Wong to assert that commonites wrongly value facts over perspectives, thus justifying “misplaced priorities.” Leaving aside their merits, (A), (C), and (E) are not mentioned in the passage and outside knowledge is not allowed. (D) is the opposite of what you are looking for.
46. **(B)**. The final paragraph begins by mentioning the main criticism of this proposal but then argues that this

supposed flaw is in fact a virtue and a golden opportunity.(A ) and (D ) ignore the author's rebuttal to the criticism .(C ) is problematic,as the paragraph is concerned with one particular tool — film .(E) ignores both the criticism and rebuttal and merely mentions an out-of-context detail.

47.(A ).In the last paragraph,the passage states that the main critique of the use of films to teach history is their rampant inaccuracies and biases.Then,the author goes on to argue that this can be a positive: *these seeming flaws are actually part of the reason why film is an ideal teaching tool*,because teachers can lead discussions of the film's problems and biases.Thus,the author certainly argues that students can benefit from exposure to inaccurate accounts of history (not that students would always benefit,but that students can benefit when the inaccurate film is accompanied by critical analysis).The other choices cannot be justified.(B ) does not have to follow ;the passage only lists both as alternatives.(C ) is too extreme — preferences do not equate to capacity.(D ) is a preference of the state committees,not the students.(E) is backwards — the last paragraph states that students can benefit by such exposure.

48.III only.The first statement is wrong,as the passage contrasts *appealing,expressive paintings that are often the most popular museum attractions* with constructivist,more recent art.The second statement is also wrong — the constructivist art,not the expressive paintings,is referred to as “brainy” in the passage.Note that these first two statements may very well be true in real life! But that is not what you are being asked.The question asks which statements can be inferred from the passage.The third statement is true — contemporary art is called “cold” in one sentence and “brainy” (or *cerebral*) in another sentence.In the final sentence of the paragraph,you are told that this brainy constructivist art is linked to expressive painting by using gesture as an expressive tool.

49.I,II,and III.The author calls *Iroquois: precarious,yet stable and balanced*,which is a good match for the first statement (*precarious* and *unstable* are reasonable synonyms).The second statement is a good match for the final sentence,*Iroquois resonates with an energy born not of the physical quality of the sculpture ... but rather of the gestural quality of the forms*.The third statement is a good match for the sentence,*As one contemplates Iroquois ... the linear forms became considerably more complex than one might presume*.If the forms are more complex than one might think,it follows that some find the forms simpler than they really are.

50.(E ).(A ) is wrong because Rousseau did argue for a social contract,meaning there should be some kind of law .(B ) is wrong because Rousseau did not think members of a state should surrender their rights to a single person.(C ) is wrong because Rousseau did argue that people could claim property if they needed it,implying the existence of private property in his ideal society.(D ) is wrong because Rousseau did not want to dismantle the social contract entirely,but to replace it with his own ideal social contract.(E) is the answer because Rousseau desired a society where *property can be taken ... to the degree necessary for the subsistence of those taking it*.

51.(B ).(A ) is incorrect because you are told *In a state of nature ... the rich would have great difficulty protecting the property that they possess*.This means the rich would still exist.(B ) is correct because this is precisely what the sentence cited above says,while (C ) is the opposite of what the passage says.(D ) is wrong because the passage says the social contract is developed in order to protect the rich,and it must develop out of a pre-law state of nature.(E) is wrong because it comes from the fourth paragraph,which discusses Rousseau's vision for a perfect society,rather than a pre-law society.

52.*To obtain assent to the contract,the rich focus their rhetoric on a seeming equality of obligation by creating rules that apply equally to all members of society*.This is the sentence that shows how the wealthy are able to convince the poor to agree to the same social contract that will allow them to be defrauded.Be careful not to go looking in the passage for specific language mentioned in the question (*hoarding* or *systematized*) on select-the-sentence questions like these.More often than not,that will lead you to the wrong sentence.

53.(A ).Choice (A ) is correct because the passage says that people should only take something if they need it (i.e.,for

survival).(B ) is wrong because it is the exact opposite of what the passage says,in that people should *not* simply enrich themselves with property.(C ) is wrong because though a house could be protection,that's not what *subsistence* means.(D ) is wrong because it isn't specific enough.(E) is wrong because it makes no sense at all.

54.(A ).Choice (A ) is correct because Lackey believed that soldiers were not terrorists and Merari believed that state actors could not be terrorists.(B ) is wrong because Merari never gave his opinion on the issue of civilian versus non-civilian attacks.(C ) is wrong because while the passage argues that it is difficult to define the word *terrorism* ,neither of the authors in question explicitly says it.(D ) is wrong because neither author weighs in on that subject.(E) is wrong because Merari narrows the definition down to violence perpetrated by sub-state insurgent groups.An elite branch of a country's military does not match this definition.

55.(E ).Choice (A ) is wrong because it is the exact opposite of how *sub-state* is used in the passage.(B ) is wrong because sub-state insurgent groups might be capable of terrorism ,but they are not necessarily terrorist.(C ) is wrong because it would be redundant when used in the sentence,and it has nothing to do with *states* at all.(D ) is wrong because anarchists want to bring about a society without government;they do not simply operate outside of a government's jurisdiction.(E) is correct because Merari uses it to draw a contrast with governmental militaries,which he thinks are not capable of terrorist acts.

56.(B ).Choice (A ) is wrong because Lackey discusses the difference between an act that targets innocents and one that targets soldiers.(B ) is correct because though the passage does say that the term is prevalent in everyday conversation,this is not a reason that it is difficult to define.Note that just because a statement is true does NOT mean it is relevant to the specific question being asked! (C ) is wrong because the third paragraph discusses these issues of circumstance.(D ) is wrong because Merari discusses whether state actors can commit terrorist acts.(E) is wrong because Merari says that *the broader the term becomes,the less useful it becomes in a dialogue*,implying that this needs to be taken into account when trying to define the word,in order to maintain its utility.

57.III only.The first statement is wrong because,while Baldwin takes issue with the average 1930's Hollywood movie for failing to represent anything other than the dominant culture,that doesn't mean he would find an individual film focused on African American culture any better.It could be bad for other reasons.The second statement is wrong because even though a film that focused only on African American issues could be just as limited as one that failed to focus on such issues,there is a significant difference: one would be reinforcing the dominant culture,while the other would be presenting an alternative culture.Baldwin would thus be unlikely to find them equally problematic.The third statement is correct because the predominant culture in the 1930's was white,so the film in question would be less likely to reinforce that culture,given that it would feature only African American issues and actors.

58.(D ).Choice (A ) is wrong because the quotation has to do with children and their ability to relate to a given work of art,rather than the culture of power.(B ) is wrong because the quote does not discuss white culture specifically.(C ) is wrong because the passage never says that America was hungry for a writer like Baldwin — make sure not to insert your own ideas or outside knowledge.(D ) is correct because even though the quote doesn't explicitly mention black children,the point is that children in general can't relate to a dilemma that doesn't relate to them .Because the passage tells you that Hollywood films of the era dealt with *white issues and employed white actors*,you know that they would not have related to black children,who would have thus been alienated from mainstream culture.(E) is wrong because the passage doesn't say that children couldn't derive *any* educational value from films they can't relate to, only that they would feel alienated because their lives would not be represented in the films.

59.(D ).Choice (A ) is wrong because *assiduous* means "diligent," which is irrelevant here.(B ) is wrong because the people studying art do not have to be artistic.(C ) is totally off-base.(D ) is correct because *erudite* means "knowledgeable," and knowledge would allow someone viewing the frieze to recognize its unique qualities.(E) is wrong because this is a question of knowledge,not applying technical or scientific skills.



60.(C ).Choice (A ) is wrong because many of its characteristics have in fact been worked out.(B ) is wrong because the passage is not primarily about artistic interpretation.(C ) is correct because *sui generis* means “unique,” and the frieze is said to be unique in two ways.(D ) is incorrect because only one paragraph discusses the existence of mortals in the frieze,and because,of course,this title is much too broad.(E) is wrong because none of the characters are ever said to be “continuous” (which doesn’t actually mean anything).

61.(D ).Choice (A ) is incorrect because the first sentence tells you that the Parthenon was constructed in the High Classical Period.(B ) is incorrect because the same sentence says that the Parthenon was regarded as a great architectural and artistic product.(C ) is incorrect because the frieze is said to have come from the temple-chamber of the Parthenon.(D ) is correct because the passage only says that it is difficult to reconstruct the frieze,not the Parthenon overall.(E) is incorrect because the frieze was part of the Parthenon and it is said to be unique.

62.(E ).Choice (A ) is wrong because you have been told that many Greek works of art featured scenes from myths and legends.(B ) is wrong because that kind of frieze exists in the Parthenon,so it would not be unique.(C ) is wrong for the same reason as (A ).(D ) is wrong because you are told that scientists regularly make an inventory of figure-types and characters on a given incomplete frieze to try to work out what went in the missing spaces.(E) is correct because the passage says that the frieze featured the first mortals *in the history of Greek art*.Thus,no mortals from that time have done this (according to the passage).

63.(C ).Choice (A ) is wrong because the passage only discusses the ways in which Sandra Cisneros’s work puts the burden on the reader.(B ) is wrong because the passage only discusses a single one of Isabel Allende’s books.(C ) is correct because the second paragraph says that Sandra Cisneros’s short story collection does have interrelated stories, but they do not use the same characters or setting in each story.(D ) is wrong because intuition is not actually a part of Sandra Cisneros’s writing.(E) is wrong because the passage does not compare short story collections with interrelated stories to short story collections without interrelated stories.

64.(E ).Choice (A ) is wrong because while tone is mentioned in relation to Sandra Cisneros’s work,it is not mentioned in relation to Isabel Allende’s work.(B ) is wrong because while time is mentioned in relation to Sandra Cisneros’s work,it is not mentioned in relation to Isabel Allende’s work.(C ) is wrong because while similarities in characters is mentioned in relation to Isabel Allende’s work,it is directly said not to exist in Sandra Cisneros’s work. (D ) is wrong because while setting is mentioned in relation to Isabel Allende’s work,it is directly said not to exist in Sandra Cisneros’s work.(E) is correct because character and setting are mentioned in relation to Isabel Allende’s work,while only mood,circumstance,time,tone,and imagery are mentioned in relation to Sandra Cisneros’ work.

65.I and II only.Statement I is correct because Rothbard only says that there were *better [economists] than Smith*. That means that at least two were better than Smith,but Smith could still have been the third best (you certainly don’t know that Rothbard actually thinks that Smith comes in third place,but the question asks for statements that simply do not contradict Rothbard’s remarks).Statement II is correct because Rothbard says that Smith’s book “eclipsed public knowledge” of better economists,meaning it had influences that it shouldn’t have.The third statement is not correct because of the first line of the third paragraph,*Even Smith’s critics do not deny the book’s immense influence*.

66.(C ).The “Invisible Hand” is described as the idea that *individuals pursuing their own self-interest could unintentionally create a more just society*.(A ) is wrong because no one is acting all that selfishly here,nor is the final result particularly just — this would be a better choice if the moviegoers’ actions somehow caused a benefit to people other than themselves.(B ) is wrong because it has little to do with selfishness or justice,but with another aspect of Smith’s writings.(C ) is correct because this system promotes selfishness (each student tries to sign up as quickly as possible for each class,without thinking of others),but those classes are then said to be “equitably distributed.” (D ) is wrong because raising prices isn’t inherently selfish,no one appears to be competing,and the end

result is not particularly just.(E) is wrong for the same reasons as (D).

67.(D ).The passage clearly indicates that Chaniel and Violnet are examples illustrating a theory that personal virtues are “irrelevant” to material success.(A ) is a distortion,as “irrelevant” indicates no relationship,not an inverse one. (B ) confuses an example given in the passage with the purpose of the passage,and creates a hierarchy that the passage did not.(C ) again confuses example and purpose;furthermore,the passage does not focus on aesthetics.(E) is an irrelevant comparison and also confuses example and purpose.

68.(B ).When a question uses the phrase “in order to” the correct answer will address the author’s purpose for inserting the detail rather than the literal meaning.(A ) is at best unknown,as her company was in operation before the war.(B ) is correct because the information supports the author’s theory that personal virtue is irrelevant to material success.(C ) comes from the wrong paragraph,as this information about Violnet does not “highlight” anything about Chaniel.(D ) is out of scope and not supported by anything in the passage.(E) is a distortion;the author mentions that Violnet could be so thought of,but his point is merely about her personal integrity and does not address said credentials.

69.(D ).In the first paragraph,the passage states that seals *who sleep on land at night but spend most of their days in coastal waters* are analogous.None of the other choices accurately follows the pattern of this analogy.

70.(C ).The author contrasts her to trained scientists and,having given criticisms of the theory credence,sides with them .(A ) is nonsensical — as a “proponent,” she is not objective by definition.To an extent,(B ) reverses the author’s point of view ;it is irrelevant because the passage does not address this issue.(D ) is exactly backwards.(E) brings up an issue that is not mentioned and does not have to follow from the text.

71.(D ).The author states that the Tokugawa period in Japan was a model for patterns of organization,and writes,as *psychologists,social historians,and Biblical prophets have all observed,in varying ways,humans inevitably fail to anticipate unintended consequences*.This certainly qualifies as a “comment on failing.” (A ) is incorrect,as Iceland is only mentioned briefly as an analogy.(B ) is wrong both because the author does not express a point of view and because the issue is the result rather than the imposition of a fixed order.(C ) addresses a very minor detail,not the purpose.(E) is a comparison that the passage does not address and therefore cannot be inferred.

72.(C ).The author states that the inversion of the financial and social rankings led to the decline of Tokugawa society.(A ) and (B ) are both incorrect because the passage states that social mobility was prohibited and that facet of the society became problematic.(D ) does not necessarily support that point— for one,no reason for any such revolt can be assumed.(E) is also incorrect;while the author does mention foreign pressure as leading to the collapse of the government,the question concerns the decline of the society,which began long before Admiral Perry’s arrival.

73.(C ).The author states that unifying Germany under Prussian rather than Austrian rule made war more likely.(A ) is a result of the treaty but the author does not imply that it was negative.(B ) is based on information from the first paragraph and is irrelevant to this question.(D ),while true,is unmentioned in the passage and thus not correct.(E) is wrong because it is a distortion to state that the author thought unifying Germany itself was the problem .

74.(A ).The passage mentions the military brilliance of Prinz Eugen of Savoy,so (A ) must be true and is correct.(B ) and (E) are both incorrect because the author does not create hierarchies of importance in either case,thus no particular ranking must be true.(C ) and (D ) are incorrect because the passage does not indicate who won and who lost.

75.(B ).The author discusses two ideas,but subtly dismisses the objectivity of the first’s adherents in the last sentence of the first paragraph.Phrases such as *it is no wonder* indicate an implicit sympathy for the second

suggestion.(A ) distorts the point,as “theories” are not the same as ideas,the two ideas are not exactly “opposing,” and the issue is not a “process.” (C ) is incorrect — the last sentence of the passage undermines “definitively” and “programs” are not the same as ideas.(D ) is wrong because *dearth* means “lack,” and Lewis’s work is certainly very popular.(E) is incorrect because,in addition to missing the point,there is no critique,only a very brief description.

76.(D ).The passage only notes that Lewis’s topics include both baseball and finance;the parallels mentioned are between the protagonists,not the professions.(A ) is incorrect;“gaming the system ” is idiomatic.(B ) is incorrect;the fourth sentence of the second paragraph describes Lewis’s protagonists.(C ) is incorrect;movie making,used as evidence,is part of popular culture.(E) is incorrect;the introductory discussion of Lewis’s education can fairly be called a mention of formative influences.

77.III only.Statement I is wrong because a person driving his own car isn’t a public service (the skateboarder is also a pretty transparent play on the idea of a “rider”).II is wrong because the free rider problem concerns people enjoying benefits without paying for them ,not people paying different amounts for the same service.III is correct because in this instance,the action of many free riders leads to a systemic problem .

78.(C ).Choice (A ) is wrong because now here in the passage is it stated that free riders cannot be blamed.(B ) is wrong because now here in the passage is it stated that free rider problems are not worth worrying about.(C ) is correct because the first sentence of the last paragraph says that *in some cases,the free rider problem is viewed as a necessary cost of government*,implying that in other cases,it is not.(D ) is incorrect because national defense is cited as an example of the inevitability of free rider problems,not as proof that they need to be stamped out as quickly as possible.(E) is incorrect because the passage does not discuss the morality of free riders.

79.I and III only.Regarding the first statement,the passage claims *modern humans are known to have diverged hundreds of thousands of years before modern humans left Africa*.To say that they diverged is to say that two species share a common ancestry to that point.Regarding the second statement,whether modern humans and Neanderthals interbred is a matter of controversy (*The team ’s conclusions were answered with skepticism on a number of fronts*) and thus this answer cannot be definitely true.Finally,although the passage does not endorse the claim that modern humans and Neanderthals interbred between 60,000 and 100,000 years ago,it treats as given the claim that the two species lived near one another during that interval (*for roughly forty thousand years of that window Neanderthals and modern humans lived near one another in the Middle East*).

80.III only.The passage says that *Paleontologists and archaeologists charged that the conclusion was unsupported by archaeological evidence*,so they appeal to archaeological evidence to criticize Paabo’s conclusions.Statement I is wrong because there is no suggestion that the contamination of Neanderthal DNA with modern human DNA was deliberate,nor even that it was done by Paabo,nor is any other reason offered to doubt his integrity.Statement II is wrong because there is no suggestion that they ignore DNA evidence,even if they are not as persuaded by it as Paabo and his team .

81.(D ).The passage claims that the reflecting surface must be far enough away so that the sound of the echo is distinct from the original sound,but not so far away that the sound is completely dissipated.You can use that information to eliminate (A ) and (B ).The passage also claims that multiple reflecting surfaces are apt to produce a reverberation rather than an echo,so you can cross off (C ).The anechoic chamber is said to prevent echoes with *sound-absorbing fiberglass walls*,so (E) is also out.

82.II and III only.The echo chamber is constructed with *the acoustical properties of a small cathedral* precisely in order to create echoes.Mountains,along with buildings,are offered as an example of the sort of reflecting surface likely to bring about an echo.

**83.I only.** The first statement is justified because in the second paragraph, de Beauvoir is quoted as saying exactly so. The second statement is not justified because at the end of the first paragraph, de Beauvoir indicates that women are viewed as *intrinsically passive and immanent*. This does NOT mean that de Beauvoir believes this (in fact, the second paragraph gives good evidence that she believes precisely the reverse). The third statement is not justified because, although de Beauvoir views both self-constraint and imposed constraint (*oppression*) as negative, she does not indicate which type she considers to be worse.

**84.II only.** In the first paragraph, the passage states that immanence is considered “a degradation” before going back and forth between immanence as a freely chosen moral fault and immanence as the result of oppression. Thus, immanence is not always characterized as either.

**85.(D).** The first sentence of the passage tells you that existentialist ethics were a major influence on de Beauvoir’s philosophy. Much of the rest of the passage is devoted to explaining that philosophy. (A) is too broad, as the passage doesn’t explain all of existential ethics, of which transcendence is just one concept. Similarly, (B) is too broad as the passage does not discuss all of feminist theory, just de Beauvoir’s. (C) is wrong — the passage is not a diatribe (the word *diatribe* is almost certainly inappropriate to describe any GRE passage). Choice (E) is again too broad and off the point.

**86.(A).** The author’s primary purpose in writing this passage is to explain the distinction between science and non-science via historical examples, such as those of Aristotle and Galileo. The author begins by posing the question of differentiating the two, and then goes on to use historical examples to explain why each does or does not meet the qualification for modern science. In (B), the author never criticizes the ancient Greek philosophers, just labels their method unscientific. In (C), now here does the author claim that it is important to follow Galileo’s scientific method, just that this is now the modern definition of science. Regarding (D), the author never makes mention of the historical definition of science. In (E), the author never argues that the findings of Galileo are more important than those of Aristotle. Further, the author only discusses one finding of each philosopher/scientist, so this answer is out of scope.

**87.(D).** Galileo’s method *forced one to first form a hypothesis, then design an experiment to confirm or deny this hypothesis, and then accept or discard the hypothesis based on one’s findings*. Aristotle’s hypothesis was that solids were the least expanded form of matter, and the experiment he designed to prove this was to show that solids sank within liquids of the same type. As this did not hold true for water, under the Galilean method Aristotle would be forced to discard his hypothesis based on the results of his experiment. Regarding (A), the passage does not contain any information about the shape of solid water or of other solid forms of matter, only about Aristotle’s conjectures on the shape of solid water. Regarding (B), the passage claims the opposite of this fact: that an object with larger mass will not fall to the ground more quickly than an object with lesser mass. As for (C), the passage states that the ancient Greeks were more philosophers than scientists, but never prohibits one from being both. As for (E), the passage states that Galileo used his scientific method to disprove many commonly held misconceptions about the rules of physics, but never states that you cannot do this in the absence of his method.

**88.(C).** The passage describes the role of Alcott’s women in their society and briefly wonders about the author’s motivation. (A) concerns only the last sentence of the passage. (B) and (D) ignore that the passage discusses a novel rather than reality. (D) is also too broad and somewhat nonsensical since the passage concerns the past. (E) misses the author’s tone — there is no indictment, merely a discussion.

**89.(E).** In the second paragraph, the passage dismisses Meg’s *taking part* by saying it *meant no more than talking to her husband, reminding him, and allowing him to be a mediator between her and the world*. (A) misses the point of the passage and is almost backwards. (B) and (C) are misplaced details about the alternative to *taking part*. (D) distorts the second paragraph, which said her husband was her mediator instead of her *taking part*.

**90.I and III only.** The first statement is justified, as the first sentence states that the man of the house was at the waterfront. The third statement must follow, because the passage states that men went out in public to conduct activities and returned home at night. The second statement, while quite possibly true, is not mentioned in the passage. The passage only states that Alcott glorified this condition in her novel, not that the entire society did so. Do not bring in outside information or make assumptions!

**91.(E).** A falsifiable idea is “one that can be shown to be false.” The statement *no human being lives forever* can only be shown to be false if one observes a human being that lives forever. However, this would be impossible (because of the word *forever*), and thus the idea is not falsifiable. In addition, answer choices (A) through (D) are incorrect. The statement *all birds are black* is falsifiable by identifying a single bird that is not black. The statement *Earth is the only planet in the universe with intelligent life* can be proven false by finding intelligent life on any planet in the universe except Earth. The statement *It rains on Mars everyday* can be proven false by observing Mars on a single non-rainy day. The statement *The sun will explode in 100,000 years* can be proven false by waiting more than 100,000 years and verifying that the sun has not exploded. Note that choices (D) and (E) seem somewhat similar — however, impractical it is to wait 100,000 years to falsify something, there is still a big difference between “100,000 years” and “forever.”

**92.(B).** The author states in the last paragraph that a theory that is unable to be proven true is very unlikely to be formed. Therefore, it appears that he/she believes that “confirmability” lacks a practical application. The author states, *it is understandable that Popper does not devote that much time to the criterion of ‘confirmability,’* inferring that confirmability is less important than falsifiability, not more. You can eliminate (A). Regarding (C), the author states that a theory that is unable to be proven true is unlikely to be formed, therefore it is unlikely he/she believes that confirmability applies to a broad range of theories. As for (D), in the first sentence of the last paragraph, the author states that confirmability follows the same logic as falsifiability (“By that logic, . . .”) and thus it appears he/she believes that confirmability is reasonable. As for (E), the author states, *it is understandable that Popper does not devote that much time to the criterion of ‘confirmability.’* Thus, the author is unlikely to agree that Popper should have developed the idea of confirmability.

**93.(C).** The second paragraph focuses on the significance of the two definitions of ‘political’, as (C) states. (A) is incorrect because no alternative is offered in the second paragraph. (B) is incorrect because there is no “revision” — this choice might describe the third paragraph. Similarly, in (D), there is no “exception.” (E) is closer to the point of the first paragraph.

**94.(B).** The author mentions the play as an example, or “illustration,” of when speech is political, which is the aspect discussed in that paragraph. (A) is incorrect, as it is used as an example, not counterpoint. (C) is wrong because the passage does not advocate a position. (D) and (E) miss the point of the example, which is neither about universality nor a fallacy.

**95.(E).** The passage states that the hegemonic model *believed governments to operate exclusively through law and the threat and enforcement of concrete punishment, such as imprisonment, monetary penalties, etc. . . which legitimizes law and supports the exercise of power.* (A), (B), and (C) all exemplify a using the rule of law to exact concrete punishments. (D) does not demonstrate a clear punishment, but does represent a clear exercise of power (the ability to censor an exhibit). Only (E) does not represent the use of law and punishment, as a coup would necessarily not be legal.

**96.(A).** The answer to this type of question is always explicit in the passage. In the third paragraph, the passage cites Hanna Pitkin: *public-spirited conversation happens when citizens speak in terms of ‘justice.’* None of the other choices is mentioned in this section of the passage.

97. *Such a definition is not precisely wrong, but rather is outdated and falls short...* (second sentence of first paragraph). This is the only one of the four sentences in paragraphs 1 and 2 that includes an explicit criticism.

98. **(B)**. The passage describes two different ideas, explanationism and predictionism, that have both been used to verify or disprove different scientific theories. As for (A), the passage never states that either theory is superior to the other. Although (C) is true, the passage only mentions the two models of the solar system as an example of the workings of explanationism. Therefore, it cannot be the main idea of the passage. Regarding (D), the passage does not describe what is required to posit a physical theory. As for (E), a predictionist and an explanationist will always diverge on how to prove that a scientific theory is true, but they might still agree on whether or not the theory is correct.

99. **(E)**. Before citing the example of the Copernicus and Brahe models of the universe, the author states, *it could be the case that a theory predicts something and yet does not provide the best explanation of it*. The author goes on to use Copernicus and Brahe as an example, stating that both of their theories have predictive power, but obviously Brahe's does not offer the best explanation for the workings of the solar system. As for (A), the author is actually arguing the opposite: that predictive power alone is never enough to verify a theory. (B) does reveal that some theories have more or less of an ad-hoc quality, but this is not the author's reason for citing this example. The main reason must be related back to explanationism. As for (C), the example showed the opposite — both theories were found to accurately predict future events, and thus they must have both made the same predictions for those future events. Although it is true that the more complicated model failed (D), the author's intent was to show that an incorrect model can still make correct predictions.

100. **I and II only**. The words *for example* at the beginning of the sentence containing the crowd analogy follow a sentence about the Pauli exclusion principle. This principle says that fermions cannot *inhabit the same fundamental state*. Electrons, which are fermions, are likened to members of a crowd in a stadium; the fact that electrons cannot *circle the nuclei of atoms in precisely the same orbits* (just as crowd members cannot sit on top of one another) is a "consequence" of the Pauli exclusion principle. Thus, the first statement is justified. These electrons *must occupy more and more distant locations*; the crowd analogy certainly illustrates that behavior, so the second statement is justified. As for the third, incorrect statement, while you do know that electrons cannot occupy the same orbits as one another and must instead occupy more and more distant locations, you do not know that those orbits are "concentric" or "evenly-spaced."

101. **(B)**. The author begins by naming the two classes of subatomic particles, and then divides the remainder of the passage into descriptions of each class and their relation to each other. Regarding (A) and (D), the author explains both of these concepts within the passage, but it is subordinate to the main idea of describing the two types of subatomic particles, and thus is not the primary purpose of the passage. As for (C) and (E), the author's primary purpose in writing is not to provide examples or to argue.

102. **(C)**. The author states that fermions, not bosons, are the constituents of ordinary matter. All other answers are mentioned in the second paragraph of the passage.

103. **(D)**. The passage states that Cooper pairs of electrons will flow in perfect harmony and with zero resistance through the metal. As an example of the same phenomenon, you are told that a swirl in a cup of superfluid helium will never dissipate. Therefore, it is correct to infer that a current through a superconducting wire will never dissipate. If you were not certain that you could be sure of this, you can still eliminate the other choices through process of elimination. As for (A), the passage states that an even number of fermions (which, according to the first paragraph, *include electrons, protons, and neutrons*) constitute a boson, but not an odd number (1/2 integer times an odd will not give an integer). The last paragraph states that scientists argue for the existence of skyrmions in a medium that might permit them to be formed, implying that they have not yet been discovered, so eliminate (B). In (C), the author

states that two electrons cannot circle a nucleus in the same orbit, but they could spin in different orbits that are the same distance from the nucleus. Finally, in (E), the author gives two examples of fermions becoming bosons at cooled temperatures, but does not say this is the *only* situation in which this can occur.

104. **(A)**. The first paragraph states that fermions obey the Pauli principle, according to which no two particles can occupy the same fundamental state. The second paragraph states that bosons tend to bunch together in exactly the same state. This is the opposite of (E), thus (E) is incorrect. (D) is also the opposite of what the passage claims. Bosons have integral spin values and fermions have half-integer spin. Answer (B) is incorrect because the passage does not discuss the total number of particle types for bosons for fermions and answer (C) is incorrect because the passage explicitly states that both fermions and bosons can exist in groups.

105. **(A)**. The passage states that the Pauli principle prohibits any two particles from inhabiting the same fundamental state. Further, you know that the Pauli principle should be applied to fermions, *which include electrons, protons, and neutrons*, but not bosons (from the second paragraph). Answer choice (A) discusses electrons, which are fermions, avoiding occupation of identical energy levels, so (A) is relevant and thus the correct answer. As for (B), a charged particle in a magnetic field neither provides the criteria for a fermion nor references inhabitation of the same state. Answer (C) does not specify the type of particle. Answer (D) is about photons, which are stated in the passage as bosons, to which the Pauli principle does not apply. Regarding (E), the passage explicitly states that the Higgs particle is a boson, so the Pauli exclusion principle definitely wouldn't apply here (the beginning of the second paragraph explains this quite clearly).

106. **III only**. You are told that Frey points out that *humans are often intrinsically motivated, and that such motivation explains heroism, craftsmanship, and other drives that do not fit neatly into the model of a narrowly focused gain-seeker*. The first statement is incorrect because the craftsman in question is working for money, rather than for the inherent love of the work. The second statement is incorrect because even though the journalist may appear to act heroically, his motivations are related to his career. The third statement is correct because the economist in question is working without hope of monetary reward.

107. **(D)**. (A) is incorrect because the passage never says that *Homo economicus* is a useful way to form mathematical models. (B) is incorrect because the passage never says *Homo economicus* is a theoretically useless construction, only that it is a problematic one. (C) is wrong because there's no reason to believe that the people who criticize the theory *don't fully understand its function*. (D) is correct because the second paragraph of the passage describes numerous problems with *Homo economicus*, all of which center around simplifying people's motivations and assuming they understand more than they actually do. (E) is incorrect because the passage never says that *Homo economicus* fell out of favor. You don't know that the handful of critics cited is representative of "most economists."

108. **I and III only**. Statement I is correct because of Veblen and Keynes, who allege that *homo economicus assumes far too great an understanding of macroeconomics on the part of humans*. II is incorrect (and too extreme) because, although Tversky says that people are *unconcerned by small chances of large losses, but quite risk-averse regarding small losses*, he does not imply that there is a broader pattern. Statement III is correct because of Amartya Sen, who says that people *can and do commit to courses of action out of morality, cultural expectations, and so forth*.

109. **(D)**. The gist of this sentence is that while scientists condemn certain practices as flawed, the methods they themselves use are subject to many of the same flaws, according to Feyerabend. You are thus looking for a word, synonymous with *repudiate*, that means to "condemn, censure," or "denounce." *Decry* is the right word.

110. **(A)**. According to the passage, Feyerabend wants to demonstrate that *historic instances of scientific progress were themselves marked by these flaws, and thus should not be seen as flaws at all*. To this end, he describes a

situation that any scientist would agree is an example of progress, and shows how it made use of practices that are now condemned by scientists, including “begging the question,” the practice of using a conclusion as evidence for that same conclusion (a little bit like using a vocabulary word in the definition for that same word), and using “propaganda.” Feyerabend basically implies that scientists have a choice between throwing this out as an example of good science or accepting these practices as part of good science. Since scientists are unlikely to say that the introduction of heliocentrism was a bad thing, they will be forced to *revise their account of what is and is not acceptable scientific practice*. Choice (B) is wrong because the point of the case study is that Galileo is a *good* example of science. As for choice (C), “subjectivity” is called “seriously flawed” in the first paragraph. Choice (D) is nonsensical — it basically says tautological reasoning is acceptable only when it’s being tautological. It’s certainly not why Feyerabend makes use of a case study. (E) misses the point completely — Feyerabend is using an example from history to defend certain ways of doing science.

111. **(C)**. The first sentence of this paragraph defines Boral’s work as a response to a culture of apathy. (A) is incorrect — the paragraph describes a response, not an elaboration. (B) is incorrect because it is not until the last paragraph that the author provides a rationale for the two theatres. (D) is beyond the scope of the passage. (E) is incorrect because there is no evaluation and the styles are not contrasting.

112. **(D)**. This is essentially a vocabulary question. “Power” is one meaning of *agency*, and this is the only meaning that makes sense in the context of creating *ways to free them selves*. (A) and (B) are other meanings of *agency* that do not make sense in context. (C) might be related to *agent* but has no relationship to *agency* or the passage here. (E) is incorrect as it implies domination over others.

113. **(E)**. The last paragraph defines a “spect-actor” as *someone who simultaneously witnesses and creates theater*. In the second paragraph, the passage states that at image events *everyone is at once theater-maker and witness*. (A) is incorrect, as theater is not mentioned. In (B), Boral specifically says that catharsis keeps people passive (also, the audience member is not acting, which is crucial to being a “spect-actor”). (C) is incorrect and, to an extent, backwards — the passage said that Boral found that position analogous to that of a passive audience. (D) is too broad, given the first paragraph about traditional theater.

114. **(A)**. At the end of the first paragraph, the author paraphrases Boral: *theater etiquette creates a kind of culture of apathy where individuals do not act communally... and remain distanced from art*. (C) and (E) can be eliminated. (B) and (D) are wrong because Boral states that traditional theater discourages political action by providing catharsis. (A) is correct because Boral states that actors *do* go into the audience, so they are not prevented from doing so.

115. **(D)**. This choice is a characteristic of an Image workshop, not a Forum workshop. In the second paragraph, the passage states that Forum workshops begin with a narrative skit (A) then the facilitator — or mediator (E) — encourages spectators to assume the role of the protagonist (B). Choice (C) is justified as the paragraph states that performances do not always arrive at a satisfactory solution.

116. **II only**. In the third paragraph, *the natural rotation of a galaxy, surrounding supernovae, and density waves* are listed as examples of the outside influence *evidently required for a theoretically unstable cloud to initiate collapse*. The first statement is a trap — fusion appears in the first paragraph and the author does not suggest that it leads to cloud contraction. (While the passage does suggest that fusion is related to supernovae and that supernovae can contribute to cloud collapse, don’t fill in the gaps yourself — the passage simply does not provide enough information for you to infer that fusion is part of a series of events that begins cloud contraction.) The second statement is true (realizing this requires you to match up “explosions of stars” in the answer choice with “supernovae” in the third paragraph). The third statement is a distortion — forcing debris *inward*, not outward, may cause cloud contraction to begin.



117.(D ).C hoice (A ) is true in real life,of course,but is not m entioned in the passage.(B ) refers to the m olecular clouds in the second paragraph,not to our solar system .(C ) is rem iniscent of this sentence in the third paragraph — *The natural rotation of a galaxy can slow ly alter the structure of a cloud* — w hich does not refer to our solar system .C orrect answ er (D ) reflects that *for a system of planets such as our solar system to form around a star during cloud contraction,the presence of these heavy elem ents in the cloud is a necessity*.(Y ou are also told that these heavy elem ents m ake up the Earth and even hum an bodies — so,they sound pretty necessary!) C hoice (E) gets the story backw ards — heavy elem ents w ere needed to create the solar system ,not vice-versa.

118.(C ).The *outw ard therm al pressure of the constituent gases* (of the m olecular cloud) is w hat is *overcom e* in the process of the collapse of the cloud.This is som ething that *inhibits*,or holds back,cloud collapse.

119.III only.The N orton-Polk-M athis H ouse uses typical R enaissance ideals as w ell as m aterials *prevalent in the Italian Renaissance*.H ow ever,the passage certainly does not say that the house itself w as built in the R enaissance. (For one,it is in San A ntonio!) The first statem ent is not true.A ccording to the passage,the prim ary purpose of the building is “to im press,” so its purpose is not prim arily utilitarian.The second statem ent is also not true.Y ou are told that the house *radiates an air of strength*,especially w hen *juxtaposed w ith the other,seem ingly fragile brick and w ood hom es of the neighborhood*,so you definitely can infer that the house “appears stronger than other nearby hom es.” The phrase “radiates an air” and the w ord *seem ingly* in the passage indicate that you are talking about *appearances* of strength,so the w ord *appears* in the third statem ent is a very good m atch (you w ould *not* be justified in inferring that the other neighborhood hom es are *actually* w eak — they just look that w ay).

120.(C ).The m ost im portant idea in the passage is that a sm all group of dolphins has been found to form social netw orks,w hich is a first am ong non-hum an anim als.O ne indication of this is that both the first and last sentences in the passage highlight this fact.A nsw er choice (A ) is stated in the passage,but is not the m ain idea;it explains the behavior of the anim als that form social netw orks.(B ) is never stated in the passage,although this study did span a relatively long tim e.(D ) is a m uch bigger claim than the passage ever suggests;you are never given a m otivation for this study.Finally,choice (E) goes against the m ain idea of the passage as the passage discusses how dolphins can form social netw orks.

121.I only.The passage states that other anim als aside from the sponger dolphins often form groups based on circum stances such as genetics or food sources.A s the dolphins are the first to be categorized as “social netw orks,” it m ust be true that groups form ed under the previous circum stances w ould not qualify as social netw orks.For the second statem ent,the passage does not state that all spongers of Shark B ay form social netw orks,only the fem ales.A s for the third statem ent,the passage does not com m ent on the location of spongers;it only m entions the spongers of Shark B ay.Thus,you cannot infer that this is true.

122.(E ).Y ou are told that this belief is an “old canard.” A *canard* is a “rum or,” or “a false or baseless story.” A n “old canard” is one that has been passed around for aw hile — very m uch analogous to an “urban legend.” Y ou are then told that the blind people in the study have “cerebral superpow ers” and that the discovery that blind people can hear better than sighted people is “a stunning exam ple of the brain’s plasticity.” Thus,(E) is correct.

123.II only.Y ou are told that A ristotle *posited a holistic,non-corporeal m ind* and that he w ould have found “shocking” the idea that “the m ind is physically located in the brain.” Thus,the first statem ent is not correct,since A ristotle believed in a “non-corporeal” (not part of the body) m ind.Since A ristotle believed in a “holistic” m ind,he did N O T think that *the m ind exists in parts or m odules*.Thus,the second statem ent is correct.A s for the third statem ent,you have no w ay to know w hat A ristotle m ight have thought about blind people’s hearing.

124.III only.The last sentence tells you that the deportation of G erm an-speaking citizens by the A llied pow ers is excised from history books because history is w ritten by the victors — this m akes the first statem ent look attractive,

but the statement says *during World War II*. The passage is clear that the deportations *took place almost two years after the conclusion of the war*. The third answer choice can be inferred from the claim that the United States hoped to keep Eastern and Central European nations away from Soviet influence, meaning that the United States and the Soviet Union were not fully aligned in their views. After you are told that *the Allied powers, too, had something to gain*, the powers listed are the Soviet Union, Britain, and the United States. Poland, however, is listed among countries *before* the “too,” which means you cannot infer that it was an Allied power. (Make sure not to bring outside information into these types of questions. This is *not* a question about what you know about World War II — it’s a question about whether certain things are actually written down in the passage.)

125. **I, II, and III.** The second half of the first paragraph lists the reasons why the Soviet Union, Britain, and the United States, respectively, had something to gain from the deportations. Each of the answer choices above undermines one of these reasons. Note the “if true” in the question stem. You are being asked to momentarily take each answer choice as a fact, and then determine whether that fact would weaken an argument from the passage. “If true” questions can sometimes ask you imagine that wacky or unlikely things are true — don’t let that distract you from the task at hand.

126. **(C).** The passage describes the theory of quantum mechanics, how it models particles as probabilistic waves, and how it has been confirmed over the past 70 years. Answer choice (C) correctly incorporates all of these ideas into the main idea of the passage. Answer choice (A) is incorrect, as it does not address the theory of quantum mechanics, which is the overarching idea of the passage. (B) and (D) are both large claims that are out of the scope of the passage. Finally, although it is obvious from the passage that tests can and have been designed to test quantum mechanics, (E) does not express the main idea of the passage.

127. **(A).** The passage states that Einstein was deeply troubled by the theory of quantum mechanics, and thus his quote must not be in support of the theory. Further, his reference to dice is to say that he did not believe the universe should be controlled by probability, but should be set. Therefore, (A) best expresses his motivation; he argues with the theory of quantum mechanics stating that particles should not be probabilistic in nature. (B) has no bearing on quantum mechanics, and thus cannot express Einstein’s motivation. (C) is out of scope because of the mention of causality. (D) both mentions Einstein’s religious beliefs, which are out of scope, and confuses Einstein’s being troubled by quantum mechanics with his lack of understanding. (E) makes a supposition you could not possibly know from the passage about Einstein’s religious beliefs.

128. **I and III only.** The first statement is a proper inference because passage states that *A particle trapped in a closed box has some finite probability of being at any location within the box*, meaning the exact location of the particle cannot be known. You know from the next sentence that opening the box will locate the particle, and thus you can deduce that the location cannot be known for certain without observing the particle. The second statement is incorrect, as the passage actually states the opposite: that measurements of position can be taken. The third choice is a correct inference because the passage states that quantum mechanics describes particles as waves and that quantum mechanics has been verified as true.

129. **I and III only.** According to the second paragraph, not knowing that they are seeing a theater piece allows viewers to *avoid the etiquette of theatergoing and engage with the action and concepts of an unfolding drama as if these actions and concepts were real*. This is a good match with the first statement. The third paragraph refers to “scripted characters” in invisible theater, so you cannot infer that *invisible theater is best described as improvised*. (It may be possible in real life for scripted characters to engage in improvised acting, but you cannot infer this from the passage.) Another reference to *dialogue ... set up by invisible theater performers* weighs against invisible theater being improvisational. The third paragraph begins, *Boal has documented various successful instances of invisible theater in which non-performers ... take unplanned public-minded action in response to the dialogue and events set up by invisible theater performers*. The last sentence of the passage also states that *... the goal of guerrilla theater is to get people talking publicly*. Thus, you can infer that *actions taken by the audience once the performance is over* can be one measure of success of a theater piece, and thus the third statement is true.

130.(A ).In the first sentence,the author calls invisible theater and guerrilla theater *two forms of street theater with similar origins but very different approaches*.This is a good match with (A ).(B ) is incorrect because the passage doesn't say which form is more effective.(C ) is too broad and the evolution is not the focus.(D ) fails because the passage states clearly — and describes in great detail — the fact that “invisible theater conceals its performative nature whereas guerrilla theater flaunts it.” (E) is much too broad,as the passage does not cover all artistic life in public places.

131.I and II only.The first statement is true,as the third paragraph goes into great detail about invisible theater's goal of encouraging public-minded talk,and the passage ends with “the goal of guerrilla theater is to get people talking publicly.” The second statement is justified because you are told in the first paragraph that *Both forms take place exclusively in public places*.The third choice is only explicitly stated in regard to guerrilla theater;invisible theater is only said to involve the audience.

132.(C ).The professors gave diplomas to the people who were the least able to answer questions as a way to mock the university's decision.(A ) does not have to be true because the passage merely discusses the form of the professors' protest.(B ) cannot be justified since it doesn't have to be true that the professors believed that result would follow .Similarly,(D ) is wrong because it is not certain that the professors considered the legality of their actions.(E) is not justifiable — no information is given about any particular policies the professors decried.

133.I and III only.The first statement,if true,would contradict the assumption of invisible theater that removing the boundary between performer and audience encourages involvement.The second statement describes a very likely result,and a goal,of invisible theater,and thus would not “undermine” the principle of invisible theater.The third statement describes a situation where the goal of invisible theater — a lively debate about public issues — was already happening,and invisible theater ruined it! This would definitely undermine the principle of invisible theater.

134.I,II,and III.You are told in this passage that *widespread genomic changes would wreak physiological havoc*, such as cancer (statement I).You are also told in the second paragraph that *many organisms have also adapted beneficial mechanisms to induce genetic change*.In short,some genetic changes are bad,but others are beneficial. The third paragraph explains how genetic change is important to immune functioning (statement II),and the last line of the passage tells you “this process is regulated by T cells to prevent harmful mutations,” so the third statement is also justified.

135.(C ).The word *seemingly* indicates that the changes are not really haphazard.“Seemingly haphazard” refers to “programmed genetic mutation.” The “this” in *this seemingly haphazard process of programmed genetic mutation* harks back to “genetic recombination,” so you can be sure that (C ) is a match.Some of the other answers may be true — (D ) certainly is — but do not answer the question.

136.I,II,and III.Pro-death signaling is given in a list of *cellular mechanisms that stymie genetic changes*.Stymie means “hinder.” Statement I is true.These cellular mechanisms are called *ubiquitous*,which means “existing everywhere,” so certainly they are “very common.” Statement II is also true.In the final sentence of the paragraph,you are told,*malfunctions in molecular players that safeguard against mutagenesis,such as the protein p53,have been implicated in diseases such as cancer*.Since the malfunction of p53 may cause cancer,you can infer that p53, when properly functioning,may work against cancer.That means Statement III is also true.

137.(A ).You are told that T cells need a large repertoire of receptors in order to be able to recognize a wide variety of pathogens.Then: *Relying only on a genetically encoded repertoire would be disadvantageously limiting— analogous to having only a few dozen language phrases with which to respond to the nearly infinite potential combinations of words in a conversation*.Instead,the repertoire is generated by a process of genetic

*recombination*... In this analogy, the language phrases are the repertoire of receptors; just as a speaker must respond to a nearly infinite body of language combinations, T cells must also have a large repertoire so they can respond to a wide variety of pathogens. You are told that the way this repertoire is increased is through genetic recombination. Note that (B) is out of scope, (C) is the exact opposite of what is being described, (D) is a distortion based on another analogy in the passage (also, an analogy on the GRE would not be “meant to elucidate” *another* analogy!), and (E) refers to the first paragraph, not the analogy in question.

138. **I only.** In the analogy referenced, the “language phrases” are receptors that can respond to various pathogens. The *nearly infinite potential combinations of words* is what a speaker must respond to — the reason a speaker needs a wide repertoire of language. Similarly, the wide variety of pathogens is the reason T cells need such a wide variety of receptors.

139. **II and III only.** You are told that Habermas *focuses the brunt of his criticism on teachers who have been insufficiently trained for the realities of the modern school environment and whose prejudices, lack of deep content knowledge, and excessive focus on order and discipline profoundly limit their effectiveness*. The word *promise* in the question stem means something like “hurt” or “limit.” Note that Habermas thinks that *too much* order and discipline is hurting teachers’ effectiveness, so the first choice is the opposite of what you want. The other two choices match up with *lack of deep content knowledge* and *prejudices*, respectively.

140. **(D).** The quotes are present to make the point that the students who are referenced — *non-white, immigrant, or non-English-speaking children* — are **NOT** exceptions. Rather, they are the class the teacher is poorly prepared to teach. Habermas’s point is that the teacher is the problem, not the students. (E) seems to reflect a truth that Habermas is railing against, but has nothing to do with the question (“exceptions” refers to students, not teachers).

141. **I and II only.** You are told that Decadent authors embraced artifice over nature, and that Huysmans’s protagonist in an example of Decadent writing surrounds himself with perfume, among other items. You can thus infer that at least one follower of the Decadent movement considered perfume to be an example of artifice, and that he held it to have surpassed, or be superior to, natural entities. But you do not know that Huysmans enjoyed surrounding himself with the perfume — only that his character did so.

142. **I, II, and III.** All three of the features are listed as characteristic of the Naturalist movement. *Vehicle for the scientific method* matches *extending the scientific method, while focused on the effects of environment on shaping character* and *elaborated on the way inherited traits influenced human behavior* both match the passage’s claim that Naturalism stressed *the influence of environment and heredity upon the individual psyche*. If Decadent authors embraced any of these literary practices, this would bring their work closer in line with Naturalism.

143. **(C).** In the first paragraph, you are told that *one limitation* of the classical method is *the reliance on average measurements: it is impossible to distinguish a uniform population of cells expressing intermediate quantities of a molecule from a population composed of separate low and high expressers*. This is a good match for choice (C). Note that (A) is precisely what you want to measure (not a limitation), and (E) is a distortion — it is *not* preferable to capture only average levels. This goes against the main point of both paragraphs.

144. **I and III only.** According to the passage, flow cytometry and RNA FISH are examples of *single-cell measurement technology*, so the first statement is true. Much of the wording in the second statement — *it is impossible to distinguish a uniform population of cells expressing intermediate quantities of a molecule* — is lifted from a sentence in the first paragraph, talking about classical methods — *not* the newer, single-celled measurement technologies. Finally, you are told that flow cytometry and RNA FISH have *made it possible to capture ... the distribution of the molecule’s expression within the population*, which is a good match for the wording in the third statement.

145.(C ).Y ou are asked for the choice N O T in the passage.Y ou are told that Portugal *once m ined Angola for slaves and raw m aterial*,so (A ) and (B ) are out.The beginning of the passage concerns Portugal taking over A ngola over a period beginning in the 16th century and culm inating in the 1920's,so kill (D ).The passage refers to *Angolan independence in 1975* — since that date is during the 20th century (1900's = 20th century,2000's = 21st century, etc.),kill (E).Y ou are told that a *civil w ar* in A ngola lasted until 2002,not a w ar against the Portuguese,so (C ) is the answ er.

146.(B ).The *grand stroke of irony* the author refers to is A ngola helping Portugal.W hy is this ironic? Y ou are told that *the country that once m ined Angola for slaves and raw m aterial is now virtually helpless...* (B ) is the best m atch.(A ) and (E) are not at all ironic.W hile (C ) and (D ) at least present som e kind of contrast,they are not the *stroke of irony* to w hich the author refers.

147.(E ).Y ou are told that G age's physical injury affected his personality,that the part of his brain that w as dam aged is now know n to be related to m orality,and that G age *literally lost one (or m ore) of the m odules in his m odular brain system* .(E) is a good m atch.(A ) is the opposite of w hat is being argued.(B ) is not indicated by the passage (and really goes against com m on sense).(C ) m ay be true but is not the reason the author presented the exam ple.(D ) relates to the previous paragraph,not to Phineas G age.

148.I **only**.The author is saying that,if the brain has a director,then that director w ould need its ow n director — and, presum ably,*that* director w ould need a director,etc.The expression “begging the question” isn't really about a question;the other tw o choices are traps.

149.II **only**.A “unitary entity” w ould N O T be split into parts,or m odules.W hile A ristotle and D escartes believed that the m ind survived death,and lived long enough ago that they couldn't have been aw are *that certain aspects of personality are know n to be controlled by certain areas of the brain*,the question is not only about A ristotle and D escartes — it is about all advocates of a unitary view of the m ind (you are told that,historically,that includes “virtually every thinker”).Y ou sim ply do not have enough inform ation about these thinkers to know w hether they think the m ind survives death,or w hether som e of them (m ore m odern thinkers,presum ably) are aw are of current research into the brain.

150.(A ).The first paragraph of the passage stats that oxytocin treatm ents are often tried in isolated cases and the overall effects are w ithout evaluation.The passage then describes a sm all study that seem s prom ising,but m akes no definitive claim s.Therefore,it is likely that the author w ould agree that the effects of oxytocin require further evaluation.A nsw er choice (B ) is incorrect,as the passage states the opposite,that oxytocin is not a “cure-all.” A lthough the author focuses on the effects of oxytocin for those that are not able to interpret social cues,answ er choice (C ) is incorrect,as the author does not state that the drug w ould not be useful for those that can already do so. The author specifically addresses (D ) in the passage,stating that the horm one oxytocin increases feelings of calm and social bonding.Finally,answ er choice (E) is incorrect,as the author never addresses oxytocin as an oral treatm ent.

151.(D ).The passage states that,*the experim ent show ed that the oxytocin had the greatest affect on those w ho w ere least able to evaluate em otions properly w hen given the control*.Thus,you can infer that those w ith the least ability to naturally infer em otions,e.g.,the ones w ho m ight need it m ost,reaped the greatest benefits of the horm one. A dditionally,(A ) is incorrect,as the passage does not discuss inconclusiveness based on sam ple size.(B ) is incorrect, as it incorrectly pairs the know n effects of the horm one in the brain w ith the results of the student study.(C ) is incorrect,as the passage does not address the ability of the students to recognize expressions,just the relative change betw een the controlled salt w ater dose and the oxytocin.Finally,(E) is incorrect for a sim ilar reason: the passage does not state that the subtler the expression the m ore difficult it w as for students to identify,just that som e expressions that w ere used w ere subtler than others.

152.(A ).The experim ent w as related to students' ability to recognize em otions from facial expressions,not their ability to tell faces apart.(B ) is m entioned in the first sentence of the last paragraph of the passage.(C ) is addressed throughout the second passage,first w hen it is stated that,*either a control dose of salt w ater w as given and then by com paring aw areness after exposure to oxytocin to the controlled salt w ater dose.*(D ) is explicitly stated in the second sentence of the second paragraph.Finally,(E) is explicitly addressed in the last sentence of the second paragraph.

153.**II and III only.**Y ou are told that *Anansi originated w ith the Ashanti people in G hana*,so the first statem ent is untrue.H ow ever,you are told that in Jam aican folklore,A nansi *outsm arts other anim al-god characters*,so those characters m ust exist.Since A nansi is called “A unt N ancy” in the U nited States and is from G hana,A nansi is know n on at least tw o continents.

154.(A ).In the first paragraph of the passage,the author describes the discovery of the cosm ic m icrow ave background.In the second,he or she explains w hy the cosm ic m icrow ave exists and its im plications to science. Therefore,the author w rites this passage to describe the discovery and reason for the cosm ic m icrow ave background. A nsw er choice (B ) is incorrect,as the author cites one exam ple of an accidental discovery,but does not explain how m ultiple discoveries can be m ade accidentally.(C ) and (D ) are incorrect,as the author does not argue or defend, respectively.Finally,the m ain theory presented in the passage is the cosm ic m icrow ave background,w hereas (E) incorrectly m akes it seem as though the author's intent is to defend the B ig B ang and that the cosm ic m icrow ave background is only a subordinate idea.

155.(C ).The second sentence in the first paragraph states that *just an instant after the Big Bang,all m atter in the universe w as so energetic,or hot,that it existed as free particles know n as quarks*.The paragraph proceeds in sequential order,and thus this event happened soonest after the B ig B ang.The events described in (A ) and (B ) are said to have happened approxim ately 400,000 years after the B ig B ang.A nsw er choice (D ) describes the present state of the cosm ic m icrow ave background,13.6 billion years later.A nsw er choice (E) is never addressed in the passage,and thus cannot be the correct answ er.

156.(D ).The passage states that Penzias and W ilson accidentally discovered the cosm ic m icrow ave background,and did not even understand w hat they had found until after consulting the Princeton group.C learly,they did not initially understand the im plications of their result.(A ) is incorrect,as the passage does not describe the im portant of the signal for w hich Penzias and W ilson w ere originally searching.(B ) is incorrect,as the passage never discusses the Princeton instrum entation used for searching for the cosm ic m icrow ave background.The capabilities of the telescope used by Penzias and W ilson is never discussed,thus (C ) is not supported.Finally,the opposite of (E) is stated in the passage,w hich says that Penzias and W ilson convinced them selves that their signal w as real before approaching the Princeton team .

157.**II and III only.**Sousa argues against m echanical m usic based on the grounds that it is insincere,and that it w ill decrease m usic in the hom e and m usic played or sung by am ateurs,as w ell as m usic instruction in education.The first statem ent is an exam ple of one of the things Sousa w as afraid of — vocal instruction being less a *norm al part of education* — and thus does not “contradict.” The second statem ent is an exam ple of the phonograph *increasing* am ateur m usic playing and “dom estic m usic,” so this does contradict Sousa's point.Finally,the third statem ent is an exam ple of recorded m usic being *m ore* sincere than live m usic,so this definitely contradicts Sousa's point.

158.(D ).H ere,*chest* really does m ean “part of the hum an body,” not “a trunk or treasury.” The statem ent about the “national” throat and chest com es right after a w orry that *m usic w ill becom e the province of m achines and professional singers only*.Thus,the “national chest” is a reference to regular people's singing.

159. *The blackbody emits just as much energy per unit time as it absorbs; the electromagnetic spectrum of the emitted energy, however...* (second sentence). The second sentence of the paragraph, after the semicolon, states that the electromagnetic spectrum of the emitted energy of a blackbody is completely determined by temperature and no other properties. Therefore, the only variable that defines the electromagnetic spectrum of a blackbody is temperature, as stated in the second sentence.

160. **I only.** The passage states in the first sentence that an idealized blackbody is an object that reflects zero incident electromagnetic radiation. Therefore, if an object reflects incident electromagnetic radiation, it cannot be an idealized blackbody and the first statement can be properly inferred. The second statement, however, cannot be inferred as the passage states that a possible Doppler shift can cause a fundamental change in the original spectral characteristics of reflected electromagnetic radiation. Finally, for the third statement, the passage states that any object that absorbs all incident electromagnetic radiation is a perfect blackbody. However, you are told that a microscopic “forest” of vertically aligned single-wall carbon nanotubes of varying heights applied to a surface is the *closest* that scientists have come to thus far creating a perfectly dark material, implying that this material is not a perfect blackbody. Therefore, you cannot properly infer that this object will absorb all incident radiation.

161. **(D).** Choice (A) is wrong, since there is no reason that one cannot produce original research by using techniques developed by someone else. (B) may be true, but this is not implied by the use of the word *borrowing*, since all you know is that one technique from evolutionary biology proved helpful to research in linguistics; this is compatible with the two areas having no common features. (C) is wrong, since the fact that methods from outside fields can help make progress in linguistics does not show that such progress cannot be made by other means. (D) is correct: research methods developed in evolutionary biology can lead to results in linguistics. (E) is the opposite of what the passage tells you.

162. *But given that some language is spoken by virtually all human beings, it would be strange if it did not reflect cognitive universals.* While it may be tempting to select the second sentence of the passage, this sentence does not give any support for universalism; it only tells you the grounds on which Chomsky came to a universalist view. On the other hand, the penultimate sentence of the passage does provide support for universalism by noting that it is likely that all languages reflect features innate to human thinking, since virtually all human beings speak some language.

163. **(B).** Choice (A) is wrong, since the passage gives examples of non-empirical ways to support universalism. (B) is correct: Gray’s team claims their research casts doubt on Chomsky’s theoretical conclusions. (C) may or may not be true, but the passage only points to evidence of features that do *not* co-vary. (D) is wrong: you know that Gray’s team found no evidence of the existence of family-invariant rules, but this does not prove that there are no such rules. (E) is wrong: Chomsky argued that universalism is the “best explanation” for the speed at which children learn a language, but that does not mean that no other explanations are possible.

164. **(B).** The passage highlights two key points as they relate to each other: the two competing theories of the universe and Hubble’s discovery that the universe is expanding. The correct answer, (B), highlights both of these points and their relation to each other. (A) and (C) highlight only one of these points each. (D) describes Hubble’s law, which does not fully capture the main idea. (E) is not an idea presented in the passage, and therefore cannot be the main idea.

165. **(E).** The passage states that, *Milton Humason, a fellow astronomer, helped Hubble to calculate the stars’ relative velocities to Earth*, but now here in the passage does it say that Hubble deduced the velocity of Earth or the stars’ absolute velocities. (A) is mentioned at the beginning of the second paragraph when the author states that, *Using this relation and years of observing*. (B) is mentioned in the first and fourth sentences of the second paragraph. (C) is stated in the second to last sentence of the second paragraph. Finally, (D) is addressed in the second and third sentences of the second paragraph.

166. **I and II only.** The passage states that Hubble's experiment was proof that you do not live in a steady-state universe, therefore it must be true that the steady-state universe theory does not allow for an expanding universe, and the first statement can be inferred properly. The passage also states that the speed at which objects are moving away from each other in space increases with an increasing distance between the objects. From this, you can properly infer that as the distance between two objects decreases, the speed at which they move apart must decrease. Thus, the second statement can be properly inferred. Finally, the third statement incorrectly assumes that once the steady-state universe theory was disproved, the Big Bang was the only theory that remained. The first sentence of the passage states that most physicists believed in one of the two theories, leaving the possibility of many more theories that might still agree with Hubble's discovery.

167. **(A).** The argument of the passage dismisses the assumption that the gods determine destiny by pointing out that they act "politically," and their agendas often conflict, so that they could not formulate a "master plan." But if the gods had a common goal, then this objection would no longer apply. On the other hand, if the agendas of the gods coincided with the demands of fate, that wouldn't support the idea that the gods were in charge of fate, so (B) would not support the assumption. If Homer and Hesiod disagreed about the motives and agendas of the gods, as (C) claims, that would not undermine the view that for both authors fate is beyond the gods. Nor would the claim that destiny would be fulfilled regardless of what the gods did — choice (D) — or the idea that the gods and mortals can make their own decisions, so long as these decisions ultimately led to the fulfillment of destiny.

168. **(B).** This is the most common sense of the term *unbiased*, and is the only one that fits in this context. (A) is clearly wrong since you are told that the role of the gods is a motif in the *Histories*. Since Herodotus provides an account of conflicts in the Hellenic world, (C) is wrong. (D) is wrong since you are told that the concept of destiny is part of Herodotus's history, so the actions of people and states by themselves cannot explain the events involved. As for (E), there is no indication that the histories were meant to challenge anyone's sensibilities.

169. **I, II, and III.** The first statement paraphrases the claim that the gods act *within certain boundaries*, while the second statement paraphrases the claim that they do so *to accomplish his or her own agenda*. The third statement is the main point of the passage: that the gods act as agents of destiny which they do not themselves control.

170. **(C).** Chemical blockers scatter, or disperse, light waves. Chemical absorbers use them to promote electrons which then release them as light waves with a longer wavelength as they return to their ground energy state. (A) makes a reference to lightening and darkening light waves, neither of which is mentioned in the passage. (B) and (D) refer to converting light waves to radiation, which is impossible since light waves are already radiation. And absorbers absorb the radiation into their molecular structure, not into the skin as in (E).

171. **(D).** The chromophores absorb light in the 290–320 nm range and use it to promote (or move up) electrons between energy levels. Since light with wavelengths of 300 nm falls in this range, their electrons should move up in energy levels when exposed to it. (C) would be correct if not for the range given: you don't know how chromophores react to light above 320 nm. (B) is the exact opposite of what you are looking for. (A) applies to physical blockers but not to chemical absorbers.

172. *The specific wavelength absorbed by a given chromophore is determined by the discrete quantal amounts of energy that are required to excite electrons between the energy levels or its molecules.* In order to select a chromophore for a particular sunscreen, you would need to know which light waves the sunscreen needs to block and which chromophore would block those waves. This sentence tells you which feature of a chromophore determines which light waves it absorbs. The next sentence in the passage might seem like a good match, but it only tells you how to select a chromophore that would absorb UVB radiation, not UVA radiation.



173.**III only.** The first statement is not true, because you are told *For all we know, the story may have been Christianized in its oral form long before the poet set it into writing.* The second statement is incorrect because you cannot make a leap from *The story of Sir Gawain and the Green Knight has its foundation in Arthurian legend* to *Sir Gawain was a knight in King Arthur's court.* The third statement is true, and a good match for the final sentence of the passage, which tells you that you do not know whether the tale is *a pagan interpretation of Christian ideals or an externally imposed Christianization of pagan codes of behavior.*

174.**(E).** Choices (C) and (D) are directly contradicted in the passages. Nothing suggests that the religious outlook of the interpreter influences their interpretation of the story, so (A) is also wrong. (B) is too strong: the passage only states that, according to its interpretation of the story, Gawain's motives are not Christian. But this doesn't show that they could not be. (E), on the other hand, follows directly from the claim that while Gawain's actions and words are Christian, his motives are not.

175.**(B).** The theory in the final sentence is that the poet associates Gawain with a pagan symbol and then portrays his "Christian" virtues as superficial in order to criticize the pagan interpretation of Christianity. Choice (B), if true, would show that the poet was, at very least, inconsistent in this message (or, possibly, the part about Gawain being superficial in his virtues is really just about Gawain.) Choice (A) is true and described in the passage, so it would not "undermine" the theory. Choices (C), (D), and (E) do not address the interplay between paganism and Christianity and thus have no bearing on the theory.

176.**I and III only.** Since Astyages reacted to his first dream by altering the marriage arrangements for his daughter (in order to select a less threatening husband), you can infer he believed her husband could be a threat. And since he intentionally selected a Persian rather than a Median, you can infer that he thought a Persian would be less of a threat. However, although you are told that Astyages' dream was *interpreted ominously by the Magi* and that *as a consequence*, he pursued a course of action (indicating that *this time*, he was influenced by the Magi), you don't know that he thought it was "always" best to obey the Magi, nor is it clear that the Magi made "recommendations." Watch out for extreme language.

177.**(A).** One of the two mistakes referred to in the passage was marrying Mandane to Cambyses. But if her son would have deposed Astyages even if he had had a different father, then altering what would have been the normal treatment of her marriage was not a mistake that led to Astyages's downfall.

178.**(B).** The passage makes the case that Bierstadt's work, which is called *optimistic* and *gaudy*, was no longer suited for the prevailing trends in art in America after the war. The optimism that once characterized American preferences is now "tempered" by the "horrors of war." In other words, Americans are beginning to take a more realistic approach to life, in a way that is sadly reflective of the disastrous things that can befall a country. Their attitude, in other words, is one of *somber realism*. Don't get misled into picking *prideful idealism* by the fact that the passage mentions American pride. The passage does not imply that there was anything idealistic about the new American attitudes after the Civil War. (A) may also be tempting but the author never makes any sort of claim as to whether the new American attitudes are misguided.

179.**(E).** A central thesis of the passage is that the same elements that initially made Bierstadt's work popular eventually contributed to its downfall. These elements were, in short, an emphasis on size and quantity rather than emotionality. The quoted phrase is a criticism of his work to this effect, providing a specific example of the opinion of the time. (C) may be tempting, but this phrase may or may not be the opinion of an expert, plus "providing expert testimony" is not the best description for the purpose of the phrase.

180.**(C).** You are told that Bierstadt "developed a fixed style that was most easily recognizable for its size" (A), that he had an "ability to represent the optimistic feeling in America" (B), that he "deliberately appealed to those rich

patrons” (D ),and that patrons could purchase a “hyperbolized replica of a W estern vista” (E).The increasing attention to “subdued appreciation for the details of A m erican life” is m entioned in the second paragraph as a trend that w orked *against* B ierstadt.